Vermont Wetlands Program

Permit Application Database Form

Under Sections 8 and 9 of the Vermont Wetland Rules



Application Submittal Instructions

- If submitting via US post, include a check in the correct fee amount made payable to the "State of Vermont," and a CD for applications that contain large files (1 MB or greater).
 - Mail to: Vermont Wetlands Program Watershed Management Division
 - One National Life Drive, Main 2 Montpelier, VT 05620-3522
- Applications can also be submitted via email to the following address: <u>anr.wsmdwetlands@vermont.gov</u>
 - If submitting via email, please mail a check in the correct fee amount, made payable to the "State of Vermont," and a copy of the Vermont Wetlands Program Application Database Form (this page) to the address provided above. It is not necessary to mail in a copy of the complete application.

Applicant Name:	Application Preparer Name:			
Fown where project is located:		County:	County:	
Span#:		Vermont Wetland	Is Project (VWP)# if Known:	
Project Location Description:		÷		
911 street address or direction from nearest interse	ection			
Brief Project Summary:				
Application Type: Individual Permit (multiple wetlands)			Wetland Determination	
Individual Permit (single wetland)	eral Permit Coverag	e Authorization	mit Amendment: VWP Project #	
Existing Land Use Type(s): (Check all that Agriculture	<i>t apply)</i> □Residen orestry □Parks	tial (single family) □Reside s/Rec/Trail □Institutio	ential (subdivision) □Undeveloped nal □Industrial/Commercial	
Proposed Land Use Type(s): (Check all the	hat apply) 🗌 Residen	tial (single family) □Reside	ntial (subdivision) Undeveloped	
□Agriculture □Transportation □F	orestry DPark	s/Rec/Trail Institutio	nal Industrial/Commercial	
Proposed Impact Type(s): (Check all that a	apply) 🗌 Buildings	Utilities Parking	Septic/Well Stormwater	
Driveway Park/Path Agriculture	□Pond □Lawr	n Dry Hydrant Bea	aver Dam Alteration Silviculture	
□Road □Aesthetics □No Impact	Other:			
Wetland and Buffer Impact Type: (Chec	k all that apply) 🗌 Dr	edge □Drain □Cut V	egetation Stormwater	
Trench/Fill Other:				
Wetland Delineation Date(s):				
Wetland Improvements	Buffer Zo	ne Improvements	Reason for Improvements	
Wetland Improvements Restoration: s.f.	Buffer Zo Restoration:	ne Improvements s.f.	Reason for Improvements	
Wetland Improvements Restoration: s.f. Creation: s.f.	Buffer Zo Restoration: Creation:	ne Improvements s.f. s.f.	Reason for Improvements Correction of Violation To offset permit impacts	
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Vermont Individual Wetland Permit Application and Determination Petition Under Sections 8 and 9

of the Vermont Wetland Rules



Applicant Information: If the applicant is someone other than the landowner, the landowner information must be included below			
Applicant Name: TransCanada/ Tim Harty			
Address: 2 Killeen Street	City/Town: North Walpole	State NH	Zip: 03609
Phone Number: 603-986-1156 Email Address: timothy_harty@transcanada.com			
Applicant Certification:			
By signing this application you are certifying that all of the inform your knowledge. Original signature is required.	ation contained within is true, ac	ccurate, and complete to th	e best of
Applicant Signature: Timothy Harty	y signed by Timothy Harty =Timothy Harty, o, ou, timothy_harty@transcanada.com, c=US 2016 06 05 14:00:10	Data	
	2016.08.05 14.09.19 -04 00		

Landowner Information: Landowner must sign the application. If landowner is different from the applicant this section must be filled out			
Check this box if landowner is the same as the applicant			
Landowner Name:			
Address:	City/Town	State:	Zip:
Phone Number:	Email Address:		
stating who will be responsible for meeting the terms and conditions of the the nature of the agreement or easement in the space provided below	permit. List the attachment for thi	ssion, and agreement with th s information in this sectio	e landowner >n. Describe
Landowner Certification: By signing this application you are certifying that all the information knowledge. Original signature is required.	n contained within is true, accura	te, and complete to the b	est of your
Landowner Signature:		Date:	

Application Preparer Information: Consultant, engineer, the applicant or lando	or other representative that is wner.	responsible for filling out the ap	plication, if other than
Application Preparer Name:	Organization/Compa	ny:	
Address:	City/Town	State:	Zip:
Phone Number:	Email Address:	·	2
Application Preparer Certification: By signing this application you are certifying that all of the info your knowledge. Original signature is required.	ormation contained within i	s true, accurate, and compl	ete to the best of
Application Preparer Signature:		Date:	-

Handwritten signatures are also accepted

1. Location of wetland and project:

Location description should include the road the wetland is located on, the compass direction of the wetland in relation to the road, 911 street address if available, and any other distinguishing features.

2. Site visit date(s) and attendees:

A site visit is **required** before the application can be called complete

2.1 Date of Visit(s) with State District Wetland	2.2. List of people present for site visit(s) including
Ecologist	Ecologist, landowner, and representatives.

3. Wetland Classification:

For multiple wetlands fill out the multiple wetlands table for sections 1 and 3 through 1

3.1. The wetland is a Class II wetland because :

3.2. Section 4.6 Presumption

If the wetland meets the Section 4.6 Presumption, it does so primarily because:

Description of the Entire Wetland: 4.

Answer the following questions regarding the entire wetland, which includes all wetland areas connected to the wetland proposed for impact. Answers may be estimates based on desktop review when the wetland extends past the investigation area (parcel boundary). Specific questions about the wetland in the project area will follow. For multiple wetlands, fill out the multiple wetlands table.

4.1. Size of Complex in Acres:

The size of the complex can be obtained from the Wetland Inventory Map for mapped wetlands, or best estimation based on review of aerial photography or site visit. This is not the size of the of the delineated wetland on the subject property unless the entirety of the wetland is represented in the delineation.

4.2. Vegetation Cover Types Present:

List all wetland types in the wetland or wetland complex and their percent cover. For example: 50 acres of softwood forested swamp; or 30% scrub swamp, 70% emergent wetland

4.3. Landscape Position:

Where is the wetland located on the landscape? For example: Bottom of a basin, edge of a stream, shore of a lake, etc.

4.4. Hydrology:

Describe the main source of water for the entire wetland. List any river, stream, lakes, or ponds

4.4.1. Direction of Flow:

For example: Stream flows from north to south through the wetland complex, or the wetland drains generally to the southwest.

4.4.2. Influence of Hydrology on the Entire Wetland:

For example: The river provides floodwater to the wetland in the spring.

4.4.3. Relation of Entire Wetland to the Project Area: The distance between the project area and any nearby surface waters

4.4.4. Entire Wetland Hydroperiod:
Discuss the frequency and duration of flooding, ponding, and/or soil saturation
4.5. Surrounding Landuse of the Entire Wetland:
For example: Rural residential and forested; Agricultural and undeveloped
4.6. Relation of the Entire Wetland to Other Nearby Wetlands:
Provide any information on wetlands or wetland complexes that are close enough to contribute to the overall function of the wetland in question
4.7. Pre-project Cumulative Impacts to the Entire Wetland:
Identify any cumulative ongoing impacts outside of the proposed project that may influence the wetland.
Examples include but are not limited to: Wetland encroachments on and off the subject property, land use management in or surrounding the wetland, or development that influences bydrology or water
quality. List any past Vermont Wetland Permits or CUD's related to this property.
5. Description of Subject Wetland and Buffer:
Subject wetland is defined as the area of wetland in the project vicinity, but not limited to the portion of the wetland to be directly impacted by the project. For the purposes of this application, the subject wetland should
encompass any portion of the wetland that could either be directly or indirectly impacted by the project, as
defined by chemical, physical, or biological characteristics. This may include the entire wetland area, or
wetland area off property. For multiple wetlands, fill out the multiple wetlands table.
5.1. Context of Subject Wetland:
Describe where the subject wetland is in the context of the entire wetland described in section 4 above. For example: Upslope, parrow eastern "finger" 400 ft, from open water portion
5.2 Subject Wetland Land Use:
For example: Mowed lawn, old field, naturally vegetated.
Describe any previous and ongoing disturbance in the subject wetland.
5.3. Subject Wetland Vegetation:
List dominant wetiand vegetation cover type and associated dominant plant species.
5.4 Subject Wetland Soils:
Use the USDA NRCS information where possible and use the ACOE Delineation Manual soil description
5.5. Subject Wetland Hydrology:
Use the description from the ACOE Delineation Manual

5.6. Buffe	r Zone:	act any clana of land adjacent to watland beyinder ()	
Describe the buffer zone of the subject wetland (50 foot envelope of land adjacent to wetland boundary).			
5.0.1.	5.6.1. Burler Land Ose. For example: Mowed shoulder forested old field payed road and residential lawns etc.		
	Describe any previous and ongoing disturba	nce in the buffer zone.	
5.6.2.	Buffer Vegetation:	nlant anapian	
	List the vegetation cover type and dominant	plant species.	
5.6.3.	Buffer Soils:		
	Use USDA NRCS information where possibl	e, and the ACOE Delineation Manual soil description.	
6. Entire We	tland Function and Value Summary (as def	ined in the Vermont Wetland Rules Section 5):	
Check whi	ch functions are present in the entire wetland		
	torm Storage		
	bitot		
	Ullal Habitat		
	ary Natural Community		
	 Evaluate the entire wetland and check at 2. Evaluate how the wetland in the project at 3. Explain how the project will not result in Include any information on specific avoidance If more than one wetland complex is involved, each wetland complex. In addition fill out the 	I that apply. Use Wetland Inventory Maps for offsite areas area contributes to the function. adverse impacts to the function. e and minimization measures. provide a function and value checklist for Multiple Wetlands Table.	
7. Water Stora	ige for Flood Water and Storm Runoff		
Function is p indicate the	present and likely to be significant: Any of the t wetland provides this function	ollowing physical and vegetative characteristics	
□ Cor	nstricted outlet or no outlet and an unconstruct	ed inlet.	
□ Phy veg rem	rsical space for floodwater expansion and dens tetation that slows down flood waters or storm noval by evaporation and transpiration.	se, persistent, emergent vegetation or dense woody water runoff during peak flows and facilitates water	
□ If a flow	stream is present, it's course is sinuous and th s in the portion of the wetland that floods.	nere is sufficient woody vegetation to intercept surface	
□ Phy drift	rsical evidence of seasonal flooding or ponding t rows, debris deposits, or standing water.	such as water stained leaves, water marks on trees,	
🗆 Hyd	Irologic or hydraulic study indicates wetland at	tenuates flooding	
If any of the determine if following ap	above boxes are checked, the wetland the wetland provides this function above ply, the wetland provides this function	provides this function. Complete the following to ve or below a moderate level. If none of the at a moderate level.	

Water Storage for Flood Water and Storm Runoff Continued
Check this box if any of the following conditions apply that may indicate the wetland provides this function at a <u>lower</u> level.
Significant flood storage capacity upstream of the wetland, and the wetland in question provides this function at a negligible level in comparison to upstream storage (unless the upstream storage is temporary such as a beaver impoundment).
Wetland is contiguous to a major lake or pond that provides storage benefits independently of the wetland.
\Box Wetland's storage capacity is created primarily by recent beaver dams or other temporary structures.
Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.
Check this box if any of the following conditions apply that may indicate the wetland provides this function at a <u>higher</u> level.
☐ History of downstream flood damage to public or private property.
Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by loss or reduction of the water storage function.
 Developed public or private property Stream banks susceptible to scouring and erosion Important habitat for aquatic life
\Box The wetland is large in size and naturally vegetated.
Any of the following conditions present downstream of the wetland, but upstream of a major lake or pond, could be impacted by a loss or reduction of the water storage function.
 Developed public or private property. Stream banks susceptible to scouring and erosion. Important habitat for aquatic life.
\Box The wetland is large in size and naturally vegetated
Any of the following conditions present upstream of the wetland may indicate a large volume of runoff may reach the wetland.
 A large amount of impervious surface in urbanized areas. Relatively impervious soils. Steep slopes in the adjacent areas.
7.1 Subject Wetland Contribution to Water Storage: Explain how the subject wetland contributes to the function listed above
7.2 Statement of No Undue Adverse Impact to <u>Water Storage for Flood Water and Storm Runoff</u>: Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, and compensation measures relevant to this function.

8. Surface and Ground Water Protection:
Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
\Box Constricted or no outlets.
\Box Low water velocity through dense, persistent vegetation.
□ Hydroperiod permanently flooded or saturated.
\Box Wetlands in depositional environments with persistent vegetation wider than 20 feet.
\Box Wetlands with persistent vegetation comprising a defined delta, island, bar or peninsula.
□ Presence of seeps or springs.
\Box Wetland contains a high amount of microtopography that helps slow and filter surface water.
\Box Position in the landscape indicates the wetland is a headwaters area.
\Box Wetland is adjacent to surface waters.
□ Wetland recharges a drinking water source.
□ Water sampling indicates removal of pollutants or nutrients.
□ Water sampling indicates retention of sediments or organic matter.
□ Fine mineral soils and alkalinity not low.
The wetland provides an obvious filter between surface water or ground water and land uses that may contribute point or nonpoint sources of sediments, toxic substances or nutrients to the wetland, such as: steep erodible slopes; row crops; dumps; areas of pesticide, herbicide or fertilizer application; feed lots; parking lots or heavily traveled road; and septic systems.
If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.
Check this box if any of the following conditions apply that may indicate the wetland provides function at a <u>lower</u> level.
\Box Presence of dead forest or shrub areas in sufficient amounts to result in diminished nutrient uptake.
Presence of ditches or channels that confine water and restrict contact of water with vegetation.
Wetland is very small in size, not contiguous to a stream, and not part of a collection of small wetlands in the landscape that provide this function cumulatively.
\Box Current use in the wetland results in disturbance that compromises this function.
Check this box if any of the following conditions apply that may indicate the wetland provides function at a <u>higher</u> level.
\Box The wetland is adjacent to a well head or source protection area, and provides ground water recharge.
\Box The wetland provides flows to Class A surface water. (Check ANR Atlas)
\Box The wetland contributes to the protection or improvement of water quality of any impaired waters.
\Box The wetland is large in size and naturally vegetated.

8.1. Subject Wetland Contribution to Water Protection:
Explain how the subject wetland contributes to the function listed above.
8.2 Statement of No Undue Adverse Impact to Surface and Ground Water Protection:
Explain how the proposed project will not result in any undue, adverse impact to this function
Include any avoidance, minimization, or compensation measures relevant to this function
9. Fish Habitat:
□ Function is present and likely to be significant: Any of the following physical and vegetative characteristics
indicate the wetland provides this function.
□ Contains woody vegetation that overhangs the banks of a stream or river and provides any of the following:
shading that controls summer water temperature; cover including refuges created by overhanging branches
or undercut banks; source of terrestrial insects as fish food; or streambank stability.
□ Provides spawning, nursery, feeding or cover habitat for fish (documented or professionally judged).
Common habitat includes deep marsh and shallow marsh associates with lakes and streams, and
seasonally flooded wetlands associated with streams and rivers.
🗆 De sum ente d'en masfes sien alle indee d'en sum is alle kitet fan menthem ailes
Documented or professionally judged spawning habitat for northern pike.
Dravidae cold enring discharge that lowers the temperature of reasining waters and erected summer
Provides cold spring discharge that lowers the temperature of receiving waters and creates summer behittet for colmonoid encodes
nabitat for salmonoid species.
The wetland is located along a tributary that does not support fish, but contributes to a larger body of
under thet does support fish. The tributary supports downstream fish by providing cooler water and
feed equivises
IUUU SUUICES.
9.1 Subject Wetland Contribution to Fish Habitat:
Explain how the subject wetland contributes to the function listed above
9.2. Statement of No Undue Adverse Impact to <i>Fish Habitat</i> :
Explain how the proposed project will not result in any undue, adverse impact to this function.
Include any avoidance, minimization, or compensation measures relevant to this function.

10. Wildlife Habitat
Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
Provides resting, feeding staging or roosting habitat to support waterfowl migration, and feeding habitat for wading birds. Good habitats for these species include open water wetlands.
Habitat to support one or more breeding pairs or broods of waterfowl including all species of ducks, geese, and swans. Good habitats for these species include open water habitats adjacent shallow marsh, deep marsh, shrub wetland, forested wetland, or naturally vegetated buffer zone.
Provides a nest site, a buffer for a nest site or feeding habitat for wading birds including but not limited to: great blue heron, black-crowned night heron, green-backed heron, cattle egret, or snowy egret. Good habitats for these species include open water or deep marsh adjacent to forested wetlands, or standing dead trees.
Supports or has the habitat to support one or more breeding pairs of any migratory bird that requires wetland habitat for breeding, nesting, rearing of young, feeding, staging roosting, or migration, including: Virginia rail, common snipe, marsh wren, American bittern, northern water thrush, northern harrier, spruce grouse, Cerulean warbler, and common loon.
Supports winter habitat for white-tailed deer. Good habitats for this species include softwood swamps. Evidence of use includes browsing, bark stripping, worn trails, or pellet piles.
Provides important feeding habitat for black bear, bobcat, or moose based on an assessment of use. Good habitat for these types of species includes wetlands located in a forested mosaic.
Has the habitat to support muskrat, otter, or mink. Good habitats for these species include deep marshes, wetlands adjacent to bodies of water including lakes, ponds, rivers, and streams.
Supports an active beaver dam, one or more lodges, or evidence of use in two or more consecutive years by an adult beaver population.
Provides the following habitats that support the reproduction of uncommon Vermont amphibian species including:
Wood frog, Jefferson salamander, blue-spotted salamander, or spotted salamander. Breeding habitat for these species includes vernal pools and small ponds.
Northern dusky salamander and the spring salamander. Habitat for these species includes headwater seeps, springs, and streams.
The four-toed salamander, Fowler's toad, western or boreal chorus frog, or other amphibians, found in Vermont of similar significance.
Supports or has the habitat to support populations of Vermont amphibian species including, but not limited to, pickerel frog, northern leopard frog, mink frog, and others found in Vermont of similar significance. Good habitat for these types of species include large marsh systems with open water components.
Supports or has the habitat to support populations of uncommon Vermont reptile species including: wood turtle, northern map turtle, eastern musk turtle, spotted turtle, spiny softshell, eastern ribbonsnake, northern watersnake, and others found in Vermont of similar significance.
Supports or has the habitat to support significant populations of Vermont reptile species, including smooth greensnake, DeKay's brownsnake, or other more common wetland-associated species.
\Box Meets four or more of the following conditions indicative of wildlife habitat diversity:

 \Box Three or more wetland vegetation classes (greater than 1/2 acre) present including but not

Wildlife Habitat Continued
limited to: open water contiguous to, but not necessarily part of, the wetland, deep marsh, shallow marsh, shrub swamp, forested swamp, fen, or bog.
The dominant vegetation class is one of the following types: deep marsh, shallow marsh, shrub swamp or, forested swamp.
Located adjacent to a lake, pond, river or stream.
Fifty percent or more of surrounding habitat type is one or more of the following: forest, agricultural land, old field or open land.
\Box Emergent or woody vegetation occupies 26 to 75 percent of wetland, the rest is open water.
\Box One of the following:
Hydrologically connected to other wetlands of different dominant classes or open water within 1 mile.
\Box Hydrologically connected to other wetlands of same dominant class within 1/2 mile.
Within 1/4 mile of other wetlands of different dominant classes or open water, but not hydrologically connected.
Wetland or wetland complex is owned in whole or in part by state or federal government and managed for wildlife and habitat conservation.
\square Contains evidence that it is used by wetland dependent wildlife species
If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a moderate level.
□ Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>lower</i> level.
The wetland is small in size for its type and does not represent fugitive habitat in developed areas (vernal pools and seeps are generally small in size, so this does not apply).
The surrounding land use is densely developed enough to limit use by wildlife species (with the exception of wetlands with open water habitat). Can be negated by evidence of use.
\Box The current use in the wetland results in frequent cutting, mowing or other disturbance.
The wetland hydrology and character is at a drier end of the scale and does not support wetland dependent species.
□ Check box if any of the following conditions apply that may indicate the wetland provides this function at a <i>higher</i> level.
\Box The wetland is large in size and high in quality.
\Box The habitat has the potential to support several species based on the assessment above.
\Box Wetland is associated with an important wildlife corridor.
☐ The wetland has been identified as a locally important wildlife habitat by an ANR Wildlife Biologist.

10.1. Subject Wetland Contribution to Wildlife Habitat Functions: Explain how the subject wetland contributes to the function listed above.				
10.2 Statement of No Lindue Adverse Impact to Wildlife Habitati				
Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.				
11. Exemplary Wetland Natural Community				
Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.				
Wetlands that are identified as high quality examples of Vermont's natural community types recognized by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department, including rare types such as dwarf shrub bogs, rich fens, alpine peatlands, red maple-black gum swamps and the more common types including deep bulrush marshes, cattail marshes, northern white cedar swamps, spruce-fir-tamarack swamps, and red maple-black ash seepage swamps are automatically significant for this function				
The wetland is also likely to be significant if any of the following conditions are met:				
Is an example of a wetland natural community type that has been identified and mapped by, or meets the ranking and mapping standards of, the Natural Heritage Information Project of the Vermont Fish and Wildlife Department.				
□ Contains ecological features that contribute to Vermont's natural heritage, including, but not limited to:				
\Box Deep peat accumulation reflecting a long history of wetland formation;				
\Box Forested wetlands displaying very old trees and other old growth characteristics;				
\Box A wetland natural community that is at the edge of the normal range for that type;				
\Box A wetland mosaic containing examples of several to many wetland community types; or				
\Box A large wetland complex containing examples of several wetland community types.				
List species or communities of concern:				
11.1. Subject Wetland Proximity to Exemplary Natural Communities				
11.2. Statement of No Undue Adverse Impact to Exemplary Wetland Natural Community:				
Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.				

12. Rare, Threatened, and Endangered Species Habitat:
Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.
Wetlands that contain one or more species on the federal or state threatened or endangered lists, as well as species that are rare in Vermont, are automatically significant for this function.
The wetland is also likely to be significant if any of the following apply:
There is creditable documentation that the wetland provides important habitat for any species on the federal or state threatened or endangered species lists;
 There is creditable documentation that threatened or endangered species have been present in past 10 years;
There is creditable documentation that the wetland provides important habitat for any species listed as rare in Vermont (S1 or S2 ranks), state historic (SH rank), or rare to uncommon globally (G1, G2, or G3 ranks) by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department;
There is creditable documentation that the wetland provides habitat for multiple uncommon species of plants or animals (S3 rank).
List name of species and ranking:
12.1. Subject Wetland Contribution to RTE Habitat:
Explain how the subject wetland contributes to the function listed above.
12.2 Statement of No Undue Adverse Impact to <u>Rare, Threatened, or Endangered Species Habitat</u> : Explain how the proposed project will not result in any undue, adverse impact to this function. Include any avoidance, minimization, or compensation measures relevant to this function.

13. Education and Research in Natural Sciences:				
Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides this function.				
\Box Owned by or leased to a public entity dedicated to education or research.				
\Box History of use for education or research.				
\Box Has one or more characteristics making it valuable for education or research.				
13.1. Subject Wetland <u>Education and Research Potential</u>: Explain how the subject wetland contributes to the function listed above.				
13.2 Statement of No Undue Adverse Impact to <u>Education and Research in Natural Sciences</u>: Explain how the proposed project will not result in any undue, adverse impact to this value. Include any avoidance, minimization, or compensation measures relevant to this value.				
14. Recreational Value and Economic Benefits:				
\Box Function is present and likely to be significant: Any of the following characteristics indicate the wetland provides				
this function.				
this function.				
this function. Used for, or contributes to, recreational activities. Provides economic benefits.				
 this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. 				
 this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. 				
 this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments:				
this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments: 14.1. Subject Wetland <u>Recreational and Economic Value</u> : Explain how the subject wetland contributes to the value listed above.				
this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments: 14.1. Subject Wetland Recreational and Economic Value: Explain how the subject wetland contributes to the value listed above.				
this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments: 14.1. Subject Wetland Recreational and Economic Value: Explain how the subject wetland contributes to the value listed above.				
this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments: 14.1. Subject Wetland Recreational and Economic Value: Explain how the subject wetland contributes to the value listed above.				
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this function. Used for, or contributes to, recreational activities. Provides economic benefits. Provides important habitat for fish or wildlife which can be fished, hunted or trapped under applicable state law. Used for harvesting of wild foods. Comments: 14.1. Subject Wetland <u>Recreational and Economic Value</u> : Explain how the subject wetland contributes to the value listed above. 14.2. Statement of No Undue Adverse Impact to <u>Recreational Value and Economic Benefits</u> : Explain how the proposed project will not result in any undue, adverse impact to this value.				

15 Open Space and Aesthetics:				
To. Open Space and Aesthelics.				
Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.				
\Box Can be readily observed by the public; and				
\Box Possesses special or unique aesthetic qualities; or				
\Box Has prominence as a distinct feature in the surrounding landscape;				
\square Has been identified as important open space in a municipal, regional or state plan.				
Comments:				
15.1. Subject Wetland Aesthetic Value: Explain how the subject wetland contributes to the value listed above.				
15.2. Statement of No Undue Adverse Impact to <u>Open Space and Aesthetics:</u> Explain how the proposed project will not result in any undue, adverse impact to this value				
Include any avoidance, minimization, or compensation measures relevant to this value.				
16. Erosion Control Through Binding and Stabilizing				
□ Function is present and likely to be significant: Any of the following physical and vegetative characteristics indicate the wetland provides this function.				
\Box Erosive forces such as wave or current energy are present and any of the following are present as well:				
Dense, persistent vegetation along a shoreline or stream bank that reduces an adjacent erosive force.				
☐ Good interspersion of persistent emergent vegetation and water along course of water flow.				
Studies show that wetlands of similar size, vegetation type, and hydrology are important for erosion control.				
What type of erosive forces are present?				
□ Lake fetch and waves				
☐ High current velocities:				
□ Water level influenced by upstream impoundment				

Erosion Control Through Binding and Stabilization Continued
If any of the above boxes are checked, the wetland provides this function. Complete the following to determine if the wetland provides this function above or below a moderate level. If none of the following apply, the wetland provides this function at a <u>moderate level</u> .
Check box if any of the following conditions apply that may indicate the wetland provides this function at a <u>lower</u> level.
The stream is artificially channelized and/or lacks vegetation that contributes to controlling the erosive force.
Check box if any of the following conditions apply that may indicate the wetland provides this function at a <u>higher</u> level.
\Box The stream contains high sinuosity.
Has been identified through fluvial geomorphic assessment to be important in maintaining the natural condition of the stream or river corridor.
16.1. Subject Wetland Contribution to Erosion Control: Explain how the subject wetland contributes to the function listed above.
16.2. Statement of No Undue Adverse Impact to <u>Erosion Control</u> : Explain how the proposed project will not result in any undue, adverse impact to this function. include any avoidance, minimization, or compensation measures relevant to this function.
17. Project Description:
17.1. Overall Project Purpose: Description of the basic project and why it is needed. Partial projects with no clear purpose
will not be accepted. For example: six-lot residential subdivision: expansion of an existing commercial building, building
a single family residence.
17.2. Description of Project Component Impacting Wetland or Buffer:
Explain in general terms which portions of the project will impact wetlands or buffer zones.
existing road through buffer to improve access, extend a trail system.

17.3.	Acreage of Parcel(s) or Easements(s): Acreage of subject property.
17.4.	Acreage of Project Area:
	Acreage of area involved in the project.
Project D	etails:
Provide de	etails regarding specific impacts to the wetland and buffer zone.
For multi	ple wetlands fill out the multiple wetland table.
18.1.	Specific Impacts to Wetland and Buffer Zone Dimensions: List portions of the project that will specifically impact the wetland or buffer zone and their dimensions. For example: driveway crossing with 16' wide fill; installation of buried sewer force main with 5' trench Including fill footprint; addition of Stormwater outfall which directs flow to northern portion of wetland
18.2.	Bridges and Culverts: Culvert circumference, length, placement and shapes, or bridge details. List any stream alteration
	permits that are required or obtained where perennial streams or rivers are involved.
18.3.	Construction Sequence:
	Describe any details pertaining to the work planned in the wetland and buffer in terms of sequence or phasing that is relevant. Describe the construction limits of disturbance, how those will be marked, and check to ensure these are shown on the site plans as well.
18.4.	Stormwater Design**
	List any stormwater permits obtained or applied for. Describe stormwater and/or erosion controls proposed. ** Erosion prevention is <u>required</u> in order to prevent sediment from entering the wetland.
18.5.	Permanent Demarcation of Limit of Impacts**
	on-the-ground boundaries for the limits of disturbance for ongoing uses. **Permanent demarcations are <u>required</u> for projects with ongoing activities in or near wetlands or buffer zones such as houses, yards, woody clearing or parking areas, and needs to be depicted on the site plans.

19.1 Wetland Impacts			
Summarize the sou	are footage of impact in the ap	propriate category. Add After-	-the-Fact
impacts here too	Round to the nearest square	foot	
Permanent Wetlar	d Fill	s f	
Tomporary Wotlan	d Impact	5.1.	
Temporary Wettan		S.I.	
Other Permanent	vetiand impact	S.T.	
(this number includ	les clearing of woody		
vegetation, dredgin	<u>g, and does not include fill)</u>		
I otal Wetland Imp	act:	S.t.	
Describe in detail the pro	posed impact to wetlands		
For example: Fill for roa	d crossing, temporary impacts	for trench and fill related to u	tility installation.
• • •			
General narrative <u>requ</u>	i <u>red</u> here even for projects w	ith multiple wetlands and in	npacts
9.2 Buffer Zone Impar	te		
Summarize the set	are footage of impact in the an	propriate category	
Summanze the squ	are lookage of impact in the ap	propriate category.	
Temporary Buffer	Impact	o f	
	IIIDaci		
Dermonant Duffer	las a st	5.1.	
Permanent Buffer	Impact	s.f.	
Permanent Buffer Total Buffer Impa	Impact ct:	<u>s.f.</u> s.f.	
Permanent Buffer Total Buffer Impa	Impact ct:	<u> </u>	
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20. Mitigation Sequence:
Before you begin, please read all of Section 20 to respond most appropriately to specific questions. Questions specifically related to Section 9.5b of the Vermont Wetland Rules
20.1. Avoidance of Wetland Impacts:
20.1.1. Can the activity be located on another site owned or controlled by the applicant, or reasonably available to satisfy the basic project purpose? If not, indicate why. Cite any alternative sites and explain why they were not chosen.
20.1.2. Can the proposed activity be practicably located outside the wetland/buffer zone? If not, indicate why. Explain the alternatives you have explored for avoiding the wetland and buffer onsite, And why they are not feasible.
20.2. Avoidance to the Impact to Functions and Values:
20.2.1. If the proposed activity cannot be practicably located outside the wetland/buffer zone,
have all practicable measures been taken to avoid adverse impacts on protected functions? Yes No
20.2.2. What design alternatives were examined to avoid impacts to wetland function? For example: Use of matting, relocation of footprint, etc.
20.2.3. What steps have been taken to minimize the size and scope of the project to avoid impacts to wetland functions and values? Include information on project size reduction and relocation.
20.2.4. Explain how the proposed project represents the least impact alternative design. Explain why other alternatives, which you described above, were not chosen.
20.3 Minimization and Postoration:
20.3. Minimization and Restoration. 20.3.1. If avoidance of adverse effects on protected functions cannot be practically achieved.
has the proposed activity been planned to minimize adverse impacts on the protected function? Yes No N/A
20.3.2. What measures will be used during construction and on an ongoing basis to protect the wetland and buffer zone? For example: Stormwater treatment, signs, fencing, etc.

Minimization and	Restoration	Continued		
20.3.3. Has a plan been developed for the prompt restoration of any adverse impacts on protected functions? Yes No N/A				
Restoration Narrative: For example: Planting along the stream.				
	Quantificatio	on of Restoratio	n.	
	Wetland	Buffer Area	Functions/Value s Addressed	
	Area (sqft)	(sqft)		_
	-			
20.4. Con Pl	n pensation: ease refer to S	Section 9.5c of th	ne Vermont Wetland Rules for co	ompensation, which is
re fu	quired when th nctions are pre	ne project will res esumed to be co	sult in net adverse impact to wet mpensable. All projects requir	land function. Not all ing compensation need
pr	rior consultati	on with the Ver	mont Wetlands Program.	
lf d	compensation	is proposed plea mav have attach	ase include a summary here. Als	so list any supporting n-Lieu-Fee proposal or
de	etailed compen	sation plan.		

21. Wetland Determination:				
If the application involves a wetland determination please answer the following. For multiple wetlands provide narrative overview for each section below, and fill out the Multiple Wetland Tables.				
U Wetland is mapped or contiguous to the Vermont Significant Wetland Inventory Map				
Wetland is not mapped on or contiguous to the Vermont Significant Wetland Inventory Map				
21.1. Reason for Petition:				
Please choose one from the drondown menu				
24.2 Determination Negrative				
21.2. Determination Narrative:				
Please provide any narrative to support the petition for a wetland determination here, including				
previous decisions by the Secretary or Water Board.				

22. Supportin	g Materials: DNAL MATEF	RIAL REQUI	RED TO CALL A	PPLICATION COM	IPLETE	
22.1. [•]	** Location M Provide a loca The Vermont roads, and VS	ap: ation map tha Natural Reso SWI wetlands	at is 8 ½" x 11" ar ources Atlas is ap s at a minimum.	nd separate from an opropriate using US	ny site plans. GS topography map base	e layer,
		Date			Title	
00.0						
ZZ.Z.	List as specific f disturbance): ied below. Pla e, erosion col	ans must be legi ntrols, building ei	ble and include weth nvelopes, and any p	and delineation and buffe	er zones, limits n.
	Title			Author	Date	Date of Last Revision
22.3. *	** U.S. Army List attachm included	Corps of Eng ent names, a	gineer Wetland lates data was co	Delineation Forms ollected, cover types	: s sampled, and number of	f paired plots
Attachme	nt #/Title	Range o	of Collection Dates	Vegetat	tion Cover Types	# of Paired Plots
22.4.4	Other Supre	rting Docum	onte:			
22.4.	Provide any o Examples in GIS shapefile	other docume clude but are s, additional	entation that supp e not limited to: ACOE forms.	ports the application Photographs, ease	ments, agreements, resto	pration/plan,
Date	Last Re	vision	Author		Title	
•						
	_					

23. Abutting Landowners

Please provide abutting landowner information so that all persons owning property within, or adjacent to, the affected wetland area of buffer zone can be notified during the public notice period. **Please use additional sheets if necessary**.

23.1. Abutting Land Owner Information: Please lis	t as first names first followed by last name
1. Name:	16. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
2. Name:	17. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
3. Name:	18. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
4. Name:	19. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
5. Name:	20. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
6. Name:	21. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
7. Name:	22. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
8. Name:	23. Name:
Street/Road:	Street/Road:
City/State/Zin:	City/State/Zin:
9. Name:	24. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
10. Name:	25. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
11. Name:	26. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
12. Name:	27. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
13. Name:	28. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
14. Name:	29. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:
15. Name:	30. Name:
Street/Road:	Street/Road:
City/State/Zip:	City/State/Zip:

24. Modified Distribution (Newspaper Notification): In situations where there is an application within a large wetland or buffer zone that has a large number of landowners, applicants can choose to limit the distribution list with a supplemental newspaper notification. At a minimum the applicant must 1) provide notice to immediate abutters,
 2) provide notice to all persons owning property containing the wetland or buffer within 500 ft. of the project area, and
 3) shall have the VWP publish notice of the application in a local newspaper generally circulating in the area where the wetland is located. **The applicant will be billed directly by the newspaper listed. Use of newspaper notification may extend the notice period, depending on when the notice posts in the newspaper**







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. 195601175



55 Green Mountain Drive South Burlington, VT 05403 Tel. (802) 864-0223

<u>Legend</u>

- Delineated Wetland (19,022 SF)
- Open Wetland Line
- --- 50' Wetland Buffer Zone Boundary

Data Source:

1. Aerial imagery provided by ArcGIS Online World Imagery Mapping Service (http://server.arcgisonline.com/arcgis /services/World_Imagery/MapServer).

Client/Project

TransCanada Hydro NE Herrick's Cove Boat Launch Maintenance Dredge Project Rockingham, VT

Figure No.

- 4
- Title

Wetland Delineation Map 7/6/2016



55 Green Mountain Drive South Burlington, VT 05403 Tel. (802) 864-0223

bkramer V:\1956\active\195601175\03_data\gis_cad\CAD\drawing\Herrick\rev_20160706\01175_05_Existing_Proposed.dwg Plotted: 7/7/16 at 10:10am

July, 2016

Existing and Proposed Conditions

Dewatering



TYPICAL DEWATERING HAYBALE BASIN





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

October 19, 2015 File: 195600819

Attention: Tim Harty

Compliance Specialist TransCanada Hydro Northeast Inc. 2 Killeen Street North Walpole, NH 03609 timothy_harty@transcanada.com

Reference: Wetland Delineation Report, Herrick's Cove Road Boat Launch, Rockingham, Vermont

Dear Tim,

At the request of TransCanada Hydro Northeast, Inc., Stantec Consulting Services Inc. (Stantec) completed a delineation of wetland boundaries at the Herrick's Cove Road boat launch site in Rockingham, Vermont (Figure 1) on October 6, 2015. The wetland delineation was completed within the vicinity of a proposed maintenance dredge site at the boat launch area. This report summarizes the results of the wetland delineation field work.

METHODOLOGY

The wetland boundary was identified using the technical criteria described in the Corps of Engineers Wetlands Delineation Manual¹ and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).² Data were collected on dominant vegetation, soils, and hydrology using U.S. Army Corps of Engineers (USACE) Wetland Determination Data Forms. Wetland boundaries were marked with pink, numbered flagging tied to standing vegetation and located using a Trimble® GeoExplorer Global Positioning System (GPS) receiver. Representative photographs were taken as appropriate.

RESULTS

Based on the wetland delineation, one wetland complex was identified in the vicinity of the Herrick's Cove Road boat launch site. The wetland is associated with the shoreline of the Connecticut River and includes portions of palustrine emergent, palustrine scrub-shrub, and open water with emergent and submergent aquatic vegetation (e.g., unconsolidated bottom). The wetland boundaries are shown on Figure 1. Completed Wetland Determination Data Forms are included in Attachment A. Table 1 summarizes the results of the wetland delineation. Representative photographs of the site are included in Attachment B.

¹ Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

² U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz, ERDC/EL TR-12, Vicksburg, MS: U.S. Army Engineer Research and Development Center.



October 19, 2015 Page 2

Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Table 1. Summary of 2015 Wetland Delineation

Wetland Name	Wetland Type ^{3,4}	Dominant Vegetation	Hydric Soil Characteristics	Evidence of Hydrology	Comments
Wetland 1	PEM/ PSS/R2UB	<u>PEM</u> : narrow-leaf cat-tail (Typha angustifolia), purple loosestrife (Lythrum salicaria), bearded sedge (Carex comosa), jewelweed (Impatiens capensis), pale-yellow iris (Iris pseudacorus), three-petal bedstraw (Galium trifidum), lamp rush (Juncus effusus), cottongrass bulrush (Scirpus cyperinus), green arrow-arum (Peltandra virginica), duck-potato (Sagittaria latifolia), soft-stem club-rush (Schoenoplectus tabernaemontani) <u>PSS</u> : glossy false buckthorn (Frangula alnus), Morrow's honeysuckle (Lonicera morrowii), speckled alder (Alnus incana), European alder (Alnus glutinosa), red osier (Cornus alba) <u>R2UB</u> : American white water-lily (Nymphaea odorata), soft-stem club-rush, American eel- grass (Vallisneria americana)	Depleted matrix	Water marks, sediment deposits, water- stained leaves	Wetlands are associated with shoreline of Connecticut River

³ Wetland classification follows Cowardin et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior Fish and Wildlife Service. FWS/OBS-79/31

⁴ PEM = Palustrine Emergent; PSS = Palustrine Scrub-Shrub; R2UB = Riverine Lower Perennial Unconsolidated Bottom



October 19, 2015 Page 3

Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Please contact me at your earliest convenience if you have any questions or require further information.

Regards,

STANTEC CONSULTING SERVICES INC.

Mait Cano

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

Attachment:

Figure 1 –Wetland Delineation Map Attachment A – Wetland Determination Data Forms Attachment B – Representative Photographs

CC. Polly Harris, Stantec Consulting Services Inc.



October 19, 2015

Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Figure 1



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.



30 Park Drive Topsham, ME USA 04086 Phone (207) 729-1199

Prepared by DLJ on 2015-10-12 Quality Review by KWH on 2015-10-15 Independent Review by MPA on 2015-10-16

00819_01_WetMap.mxd

Legend

- Delineated Wetland
- ••• Open Wetland Line

Data Source:

1. Aerial imagery provided by ArcGIS Online World Imagery Mapping Service (http://server.arcgisonline.com/arcgis /services/World_Imagery/MapServer).

195600819

Client/Project Herrick's Cove Road Boat Launch Maintenance Dredge Project Rockingham, Vermont

Figure No.

1 Title

Wetland Delineation Map 10/16/2015



Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Attachment A – Wetland Determination Data Forms



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Designation					and the second se						
Project/Site:	Herrick's (Cove Road Boat Lau	unch				Stantec Project #:	195600819	9	Date:	10/06/15
Applicant:	TransCan	ada Hydro Northeas	st Inc.							County:	Windham
Investigator #	1. Matt Area		Inv	vestigator #2	· Ebon F	State:	Vermont				
nivestigator #	I. Wall Aisei	lauit		IIIV	vestigator #2	LUCIT			State.	Vermont	
Soli Unit:	Hadley sill	lioam				INV	VI/VVVI Classification	PSS		Wetland ID:	Vvetland 1
Landform:	Floodplain				Local Relief	: Concav	/e			Sample Point:	W1
Slope (%):	0	Latitude:	43.18117	4	Longitude	: -72.444	042	Datum	:	Community ID:	PSS
Are climatic/h	drologic con	ditions on the site ty	pical for th	nis time	of year? (If no.	. explain in r	emarks)	☑ Yes □	No	Section:	
Are Vegetatio		or Hydrology Dic	nificantly	lieturbo	42	T	Are normal circumst	tances preser	nt2	Townshin	
Are vegetation			grinicantity (Township.	
Are vegetation	пш, Soli Ц	or Hydrology Lla	turally prot	Diematic	37		⊡ fes			Range:	Dir:
SUMMARY O	FINDINGS										
Hydrophytic V	egetation Pre	esent?		⊡Yes	No)	and the second second	Hydric Soils	Present?	Section Streams	☑ Yes □ No
Wetland Hydro	ology Presen	t?		⊡Yes)		Is This Sam	pling Point	Within A Wetlan	nd? Ves No
Remarks:								it in the country	, s		
rtomanto.											
				and the second second							
HYDROLOGY											
Wetland Hyd	rology India	ators (Check here)	if indicator	s are no	t present). 🗆					
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<u>Finita</u>	<u>γ.</u>] Δ1 - Surface	Mater			RQ _ Water_St	tainad Las	Ves		Secondary	B6 Surface Soil	Cracks
	A1 - Sunace	ater Table			1B13 - Aquatic	Fauna	Ves		H	B10 Drainage D	Patterns
	1 A3 - Saturat	ion			1B15 - Marl De	nosite				B16 - Moss Trim	Lines
	B1 - Water M	Marks		H	1C1 - Hydroge	n Sulfide (dor		H	C2 - Dry Season	Water Table
	B2 - Sodimo	ant Denosite			1C3 - Ovidized	Rhizoenh	eres on Living Poots		H	C8 - Crawfish Bur	
	B3 - Drift De	nneite			1C4 - Presence	o of Rodu	red Iron		H	C0 - Craynan Dur	isible on Aerial Imagen
1 2	B4 - Algal M	at or Crust			1C6 - Recent lu	ron Reduc	tion in Tilled Soils		H	D1 Stunted or S	trossed Plants
	B5 - Iron De	nosite		H	107 - Thin Muc	k Surface	don'n' filled 3003		H	D1 - Stunieu or S	Position
	B7 - Inundat	ion Visible on Aerial Im			Other (Evolair	n in Roma	the)		H	D3 - Shallow Agu	itard
	B8 - Sparsel	ly Venetated Concave S	Surface	F		Thritteniu	(G)			D4 - Microtonogra	aphic Relief
-		y vogetated concure t	Juliuoo							D5 - FAC-Neutral	Test
ET LL OL											
Field Observa	ations:										
Surface Water	Present?	🗆 Yes 🗹 No	Depth:	-	(in.)			Motland Lu			Vee D Ne
Water Table P	resent?	🗆 Yes 🗹 No	Depth:	-	(in.)			wettanu ny	urology Fi	esent?	Tes LINO
Saturation Pre	sent?	Yes I No	Depth:	-	(in.)						
					()		Land of the second second				
Describe Recor	ded Data (sti	ream gauge, monitori	ng well, aer	rial photo	os, previous ir	nspection	s), if available:		N/A		
Remarks:											
5011 5			10 10 10 10		11-12-10 A	10.9					
SOILS			2536				· D. · Al				
SOILS Map Unit Nam	e:	Hadley silt loam				S	eries Drainage Class:	Well drained	1		
SOILS Map Unit Nam Taxonomy (Su	e: bgroup):	Hadley silt loam				S	eries Drainage Class:	: Well drained	ł		
SOILS Map Unit Nam Taxonomy (Su Profile Descri	e: bgroup): ption (Describe to	Hadley silt loam	dicator or confirm the	e absence of in	vicators.) (Type: C=Co	ncentration, D=E	eries Drainage Class:	: Well drained	Location: PL=Pore Li	ning, M=Matrix)	
SOILS Map Unit Nam Taxonomy (Su Profile Descrit Top	e: bgroup): ption (Describe to Bottom	Hadley silt loam	dicator or confirm the	e absence of in Matri)	rdicators.) (Type: C=Cor X	ncentration, D=D	eries Drainage Class: epikton, RM=Reduced Matrix, CS=Cover	: Well drained redCoated Sand Grains; Mottles	Location: PL=Pore Li	ning, M=Matrix)	Texture
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth	e: bgroup): ption (Describe to Bottom Depth	Hadley silt loam	dicator or confirm the	e absence of in Matrix Moist)	ndicators.) (Type: C=Con X 06	ncentration, D=E	eries Drainage Class: expletion, RM=Reduced Matrix, CS=Cover Color (Moist)	: Well drained red.Coated Sand Grains; Mottles	Location: PL=Pore Li	ning, M=Matrix)	Texture (e.g. clay, sand, loam)
SOILS Map Unit Nam Taxonomy (Su Profile Descrit Top Depth	e: bgroup): ption (Describe to Bottom Depth	Hadley silt loam the depth needed to document the in Horizon	dicator or confirm the Color (N	e absence of in Matrix Moist)	ndicators.) (Type: C=Con X 100	ncentration, D=0	eries Drainage Class: epieton, RM=Reduced Matrix, CS=Cover Color (Moist)	: Well drained red/Coated Sand Grains; Mottles %	Location: PL=Pore Li	ning, M=Matric)	Texture (e.g. clay, sand, loam)
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0	e: bgroup): ption (Describe to Bottom Depth 6	Hadley silt loam	dicator or confirm the Color (N 2.5Y	e absence of in Matrix Moist) 3/2	dicators.) (Type: C=Coo X % 100	ncentration, D=0	eries Drainage Class: epieton, RM=Reduced Matrix, CS=Cover Color (Moist)	Well drained	Location: PL=Pore Li Type	ning, M=Mairki)	Texture (e.g. clay, sand, loam) silt loam
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6	e: bgroup): ption (Describe to Bottom Depth 6 14	Hadley silt loam	dicator or confirm the Color (N 2.5Y 2.5Y	e absence of in Matrix Moist) 3/2 4/2	nfcators.) (Type: C=Cor X % 100 95	ncentration, D=0	epies Drainage Class: epieton, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6	ed/Coated Sand Grains; Mottles % 5	Location: PL=Pore L Type C	ning, M=Matrix) Location M	Texture (e.g. clay, sand, loam) silt loam sandy loam
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SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field In A2- Histic E	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pinedon	dicator or confirm the Color (f 2.5Y 2.5Y 2.5Y ere if indica	e absence of In Matrix Moist) 3/2 4/2 4/1 ators are	dcators.) (Type: C=Co X % 100 95 90 e not present S8 - Polyvalue S9 - Tbin Dark	ncertration, D=T	ieries Drainage Class: kepleton, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 J Iface (LRR R, MLRA 1498) (ER D. NLRA 1498)	Well drained redCoated Sand Grains; Mottles % 5 10 Indicator	Type C C C s for Proble A16 - 2 cm	ning, M=Matriv) Location M M matic Soils 1 Vuck LRR K, L, MLRA 1	Texture (e.g. clay, sand, loam) silt loam silt loam
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field In A1- Histosol A2- Histo E	Hadley silt loam	dicator or confirm the Color (N 2.5Y 2.5Y 2.5Y ere if indica	e absence of In Matrix Moist) 3/2 4/2 4/1 ators are	dicators.) (Type: C=Cor X 90 95 90 en ot present S8 - Polyvalue S9 - Thin Dark S1 - L hamy M	ncentration, D=D 10YR 10YR 10YR): E Below Sto Curky Adrese	epieton, RM=Reduced Matrix, CS=Cover epieton, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 IffaCe (LRR R, MLRA 1499) LRR R, MLRA 1499) LRR R, MLRA 1499) LRR R, MLRA 1499)	Well drained	Type C C	ning, M=Matric) Location M M matic Soils ¹ Vluck (LRR K, L, MLRA 1 Prairie Redox URR R	Texture (e.g. clay, sand, loam) silt loam sandy loam 49B) K, L, R)
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field I 1 A1- Histosol 1 A2 - Histic E A3- Black H	Hadley silt loam	dicator or confirm the Color (N 2.5Y 2.5Y ere if indica	a absence of in Matrix Moist) 3/2 4/2 4/1 ators are	afcators.) (Type: C=Cor X % 100 95 90 e not present S8 - Polyvalue S9 - Thin Dark F1 - Loamy (A)	ncertration, D=0	epieten, RM=Reduced Matrix, CS=Cover epieten, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 -	Well drained	Interpretent Type C C Softer Min	ning, M=Matric) Location M M matic Soils ¹ Vluck (LRR K, L, MLRA 1 Prairie Redox (LRR Locky Peat of Peat (Peat of Peat)	Texture (e.g. clay, sand, loam) silt loam sandy loam 49B) (K, L, R) LRR K, L, R)
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SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field II A1- Histosol A2 - Histo E A3 - Black H A3 - Black H A4 - Hydroge A5 - Stratifie A12 - Thick I	Hadley silt loam the depth needed to document the in Horizon Horizon Comparison Horizon I Comparison Horizon I Comparison Horizon Horiz	dicator or confirm the Color (N 2.5Y 2.5Y 	e absence of In Matrix Moist) 3/2 4/2 4/1 tors are	dicators.) (Type: C=Cor X % 100 95 90 enot present S8 - Polyvalue S9 - Thin Dark F1 - Loamy GI F3 - Depleted F6 - Redox D2 F7 - Depleted	ncertration, D=0	epietion, RM=Reduced Matrix, CS=Cover epietion, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 J IffaCe (LRR R, MLRA 1499) LRR R, MLRA 1499) LRR R, MLRA 1499) ral (LRR K, L) ix	Well drained	Type C C C s for Proble A10 - 2 cm A10 - 2 cm A10 - 2 cm S3 - 5 cm S3 - 5 cm S3 - 8 cm S3 - Dark S S8 - Polyval S9 - Thin Da S9 - T	Matricio	Texture (e.g. clay, sand, loam) silt loam sandy loam silt loam <tr< td=""></tr<>
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric C C C C C C C C C C C C C	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field In A1- Histosol A2- Histosol A2- Histosol A3- Black H A4- Hydroge A5- Stratifie A11- Deplet A12- Thick I S12- Sendu A	Hadley silt loam The depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic en Sulfide d Layers ed Below Dark Surface Dark Surface Anck Minerel	dicator or confirm the Color (N 2.5Y 2.5Y 2.5Y ere if indica	a absence of in Matrix Moist) 3/2 4/2 4/1 ators are	Afcators.) (Type: C=Co X 96 90 95 90 e not present 88 - Polyvalue 99 - Thin Dark F1 - Loamy Mi F2 - Loamy Mi F2 - Loamy Mi F3 - Depleted F6 - Redox Da F7 - Depleted F6 - Redox Da	ncertration, D=0	eries Drainage Class: expletion, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 -	Well drained	Type C C sfor Proble A10 - 2 cm A16 - Coast S3 - Folyval S4 - Polyval S8 - Polyval S9 - Thin Da F12 - Iron-M	ning, M-Matrix) Location M M M matic Soils 1 Vluck (LRR K, L, MRA 1 Prairie Redox (LRR K, L) urface (LRR K, L, M) ue Below Surface (LRR K, L) anganese Masses	Texture (e.g. clay, sand, loam) silt loam sandy loam silt loam
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field I A2 - Histics E A3 - Black H A4 - Hydroge A5 - Stratifie A5 - Stratifie A11 - Deplet A5 - Stratifie A5 - Stratifie	Hadley silt loam The depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic un Sulfide d Layers ed Below Dark Surface Dark Surface Layk Surfac	dicator or confirm the Color (f 2.5Y 2.5Y 2.5Y ere if indice	e absence of In Matrix Moist) 3/2 4/2 4/1 ators are	dcators.) (Type: C=Co X 96 90 95 90 e not present S8 - Polyvalue S9 - Thin Dark S9 - Thin Dark S9 - Thin Dark F3 - Depleted F3 - Depleted F6 - Redox De F7 - Depleted F8 - Redox De	ncertration, D=T 10YR 10YR 10YR): E B Below St c Surface (surface) (a Surface) (a Surface) a Relow St factorial Matrix ark Surface) Dark Surface) Dark Surface) (b Surface)	epietion, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 Inface (LRR R, MLRA 1498) tral (LRR K, L) ix 9 acce	Well drained redCoated Sand Grains; Mottles % 5 10 Indicator 	Image: Second	ning, M-Matrix) Location M M M Muck (LRR K, L, MLRA 1 Prainfe Redox (LRR Loky Peat of Peat (Loky Peat of Peat (Loky Peat of Peat (Loky Clark K, L, M) ue Below Surface (LRR K, L, M) ue Below Surface (LRR K, L, M) sondice are associated to the second to the secon	Texture (e.g. clay, sand, loam) silt loam sandy loam <tr< td=""></tr<>
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SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric C C C C C C C C C C C C C	e: bgroup): ption (Describe to Depth 0 14 20 Soil Field In A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A11 - Deplet A12 - Thick I S1 - Sandy R S4 - Sandy C S5 - Sandy F S6 - Strippec S7 - Dark S0	Hadley silt loam the depth needed to document the in Horizon I 2 3 ndicators (check he pipedon istic en Sulfide d Layers ed Below Dark Surface Dark Surface Dark Surface Dark Surface Auck Mineral Sleyed Matrix Redox I Matrix Iface (LRR R, MLRA 149B) None	dicator or confirm the Color (N 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/2 4/2 4/1 	dicators.) (Type: C=Cor X % 100 95 90 Polyvalue S9 - Thin Dark F1 - Loamy GI F3 - Depleted F6 - Redox De F7 - Depleted F8 - Redox De F8 - Redox De	servertration, D=r 10YR 10YR): E Below St Surface - ucky Mine levyed Matrix Matrix ark Surfac Dark Surfac	epieten, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 IffaCe (LRR R, MLRA 1498) LRR R, MLRA 1498) ral (LRR K, L) ix 9 ace	Well drained	Location: PL=Pore L Type C C -	ning, M-Matrix) Location M M M matic Soils 1 Vuck (uRR K, L MURA 1 Prairie Redox (uRR cky Peat of Peat () Urdace (uRR K, L M) ue Below Surface (uRR K, L M) ue Below Su	Texture (e.g. clay, sand, loam) silt loam sandy loam -
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric C C C C C C C C C C C C C	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field II A1- Histosol A2 - Histo E A3 - Black H A4 - Hydrogg A5 - Stratifie A5 - Stratifie A11 - Deplet A5 - Stratifie A5 - Stratifie A5 - Stratifie A5 - Stratifie S1 - Sandy M S4 - Sandy G S5 - Sandy F S6 - Strippec S7 - Dark Su	Hadley silt loam The depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic pipedon istic ed Below Dark Surface Dark Surface Auck Mineral Sleyed Matrix Redox i Matrix Irface (LRR R, MLRA 1498) None	dicator or confirm the Color (f 2.5Y 2.5Y 2.5Y ere if indica	e abserce of in Matrix Moist) 3/2 4/2 4/1 ators are 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	dcators.) (Type: C=Cor X 96 90 90 -	secretration, D=0	eeries Drainage Class: eepklon, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 -	Well drained red/Coated Sand Grains; Mottles % 5 10 Indicator Indicator Control of the second	Type C C C 	ning, M-Matrix) Location M M M matic Soils 1 Vluck (LRR K, L, MRA 1 Prairie Redox (LRR Cky Peat of Peat (L) Inflace (LRR K, L, M) ULG Below Surface (LRR K, L, M) ULG Below Surface (LRR K, L, M) Spodic (ULRA 14A, 1 arent Material Shallow Dark Surf in in Remarks) ation and welland hydrology I	Texture (e.g. clay, sand, loam) silt loam sandy loam -
SOILS Map Unit Nam Taxonomy (Su Profile Descri Top Depth 0 6 14 NRCS Hydric C C C C C C C C C C C C C	e: bgroup): ption (Describe to Depth 6 14 20 Soil Field I A2 - Histose A2 - Histose A2 - Histose A3 - Black H A4 - Hydroge A5 - Stratifie A5 - Stratifie S5 - Sandy F S6 - Strippec	Hadley silt loam The depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic an Sulfide d Layers ed Below Dark Surface Dark Surface Dark Surface Auck Mineral Sileyed Matrix Redox Matrix Iface (LRR R, MLRA 149B) None	dicator or confirm the Color (f 2.5Y 2.5Y 2.5Y ere if indica	e absence of In Matrix Moist) 3/2 4/2 4/1 ators are 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	dcators.) (Type: C=Co X 9% 100 95 90 e not present S8 - Polyvalue S9 - Thin Dark S9 - Thin Dark F1 - Loamy M F2 - Loamy M F2 - Loamy M F3 - Depleted F6 - Redox De F7 - Depleted F8 - Redox De	ncertration, D= 10YR 10YR 10YR : E Below St C Surface (ucky Mine leyed Matrix Matrix ark Surface ucky Surface (ucky Surface) ark Surface (ucky Surface) Surface (ucky Surface) Surface (ucky Surface) Surface) Surface (ucky Surface) Surface) Surface (ucky Surface) Surfa	eries Drainage Class: epieton, RM=Reduced Matrix, CS=Cover Color (Moist) 5/6 5/6 1ffaCe (LRR R, MLRA 1498) LRR R, MLRA 1498) LRR R, MLRA 1498) LRR R, MLRA 1498) ace	Well drained	Location: PL=Pore L Type C C -	ning, M-Matric) Location M M M matic Soils ¹ Muck (LRR K, L, MRA T Prairie Redox (LRR K, L) Inface (LRR K, L, MI) ue Below Surface (LRR K, L, MI) ue Below Surface (LRR K, L, MI) arranganese Masses ont Floodplain Soil Spodic (MLRA 144A, 1 Shallow Dark Surf ini in Remarks) tion and wetland hydrodegy t	Texture (e.g. clay, sand, loam) silt loam sandy loam silt loam

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WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site:	Herrick's Cove Road Boat	Launch				Wetland ID: Wetland 1 Sample Point W1
VEGETATION	(Species identified in all upper	ase are non-nativ	e species.)		
Tree Stratum (P	lot size: 10 meter radius)					Deminance Test Werkshoet
1	<u>Species ivame</u>	-	% Cover D	ominant V	EACIA/	Dominance lest worksneet
2	Acer sacchannum		00	1	TACVV	Number of Dominant Species that are OBL_EACW_or EAC: 3 (A)
3						
4						Total Number of Dominant Species Across All Strata: 3 (B)
5.						
6.						Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.						
8.						Prevalence Index Worksheet
9.						Total % Cover of: <u>Multiply by:</u>
10.						OBL spp. 0 x 1 = 0
		Total Cover =	60			FACW spp. 135 x 2 = 270
						FAC spp. 67 x 3 = 201
Sapling/Shrub Str	atum (Plot size: 5 meter radius)					FACU spp6 $x \ 4 = $ 24
1.	Frangula alnus		50	Y	FAC	UPL spp $x \ 5 = $
2.	Cornus alba		5	N	FACW	
3.	Alnus Incana		10	N	FACIU	$1 \text{ otal} \underline{208} (A) \underline{495} (B)$
4.	Quercus rubra		3	IN	FACU	Drauslance Index - D/A - 2,280
5.						Prevalence index = $B/A = 2.300$
7						
8						Hydrophytic Vegetation Indicators:
9						Ves IN No Rapid Test for Hydrophytic Vegetation
10.						\Box Yes \Box No Dominance Test is > 50%
		Total Cover =	68			I Yes □ No Prevalence Index is ≤ 3.0 *
						☐ Yes ☑ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 2 meter radius)					□ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *
1.	Onoclea sensibilis		60	Y	FACW	
2.	Solidago flexicaulis		3	Ν	FACU	present, unless disturbed or problematic.
3.	Frangula alnus		2	N	FAC	Freedom manage and a freedom manage
4.	Equisetum arvense		5	N	FAC	Definitions of Vegetation Strata:
5.	Equisetum hyemale		10	N	FAC	
· 6						Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
1.						neight (DDri), regardiess of neight.
8.						Contine/Chrub Woody plants less than 3 in DBH and greater than 3 28 ft
9.						tall.
10.		_				
12						Herh - All herbaceous (non-woody) plants, regardless of size, and
13						woody plants less than 3.28 ft. tall.
10.						
15.						Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	80			
Woody Vine Strat	um (Plot size: 10 meter radius)					
1.						
2.			-			
3.						Hydrophytic Vegetation Present Ves No
4.						
5.						
Demerium		I otal Cover =	0	_		
Remarks:						

÷

Additional Remarks:

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WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Drojoot/Cito:											
FIDECISILE.	Herrick's C	Cove Road Boat Lau	Inch				Stantec Project #:	195600819)	Date:	10/06/15
Applicant:	TransCana	ada Hydro Northeas	t Inc.							County:	Windham
Investigator #1	Matt Areer	ault	it into.	Inv	estinator #2	Eben B	lakor			State:	Vermont
nivestigator #1.	Iviall Arser	lault		111	resligator #2.	LUCITL		Listand		State.	Vermont
Soli Unit:	Hadley silt	Ioam				INV	WI/WWWI Classification	Upland		vvetland ID:	vvetiand 1
Landform:	Terrace				Local Relief:	Concav	/e			Sample Point:	U1
Slope (%):	0	Latitude:	43.18105	2	Longitude:	-72.444	138	Datum		Community ID:	Upland
Are climatic/hyd	drologic con	ditions on the site ty	pical for th	nis time	of year? (If no.	explain in r	emarks)	☑ Yes □	No	Section:	
Are Vegetation		or Hydrology Dic	nificantly	listurho	42	T	Are normal circumst	tances presen	t2	Townshin	
Are vegetation			finite antity c		0					Township.	
Are vegetation	Ц, 5011 Ц	or Hydrology Lla	turally prot	plematic	7	and the second second	🗠 res			Range:	Dir:
SUMMARY OF	FINDINGS										
Hydrophytic Ve	getation Pre	esent?		□Yes	No No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	loav Presen	t?		□Yes	D No			Is This Sam	oling Point	Within A Wetlan	nd? Yes No
Remarks:	109) 1100011			100				ie mie eam	pingront		
Remarks.											
HYDROLOGY											
Watland Hudr	alagu India	atora (Chook hora	if indiantor	o oro no	t propont)					
wettand Hydr	ology maid	ators (Check here	in indicators	saleno	present). 🖸			o		
Primary		14/ 1		_					Secondary		2
	A1 - Surface	Water]B9 - Water-St	ained Lea	ives			B6 - Surface Soil	Cracks
	A2 - High W	ater Table			B13 - Aquatic	Fauna				B10 - Drainage P	atterns
	A3 - Saturati	ion]B15 - Marl De	posits				B16 - Moss Trim	Lines
	B1 - Water M	Marks]C1 - Hydroger	n Sulfide (Odor			C2 - Dry-Season	Water Table
	B2 - Sedime	nt Deposits			C3 - Oxidized	Rhizosph	eres on Living Roots			C8 - Crayfish Bur	rows
	B3 - Drift De	posits		C]C4 - Presence	e of Reduc	ced Iron			C9 - Saturation Vi	isible on Aerial Imagery
	B4 - Algal M	at or Crust			C6 - Recent Ir	on Reduc	tion in Tilled Soils			D1 - Stunted or S	tressed Plants
	B5 - Iron De	posits			C7 - Thin Muc	k Surface				D2 - Geomorphic	Position
	B7 - Inundati	ion Visible on Aerial Ima	agery	F	Other (Explain	n in Rema	rks)			D3 - Shallow Aqui	itard
	B8 - Sparsel	y Vegetated Concave S	Surface							D4 - Microtopogra	aphic Relief
										D5 - FAC-Neutral	Test
Field Observat	tions:							Contracts (12)		and the second second like	
Conferent Materia	Denser 10				(***)						
Surface vvater	Present?		Depth:	-	(In.)			Wetland Hy	drology P	resent?	Yes 🗹 No
Water Table Pr	esent?	🗆 Yes 🗹 No	Depth:	-	(in.)						
Saturation Pres	ent?	🗆 Yes 🗵 No	Depth:	-	(in.)						
Deserthe Desert	ad Data (at			ial abata		anadian	a) if eveileble.		NUA	a share the	
Describe Record	led Data (Sti	earn gauge, moniton	ng well, ael	lai prioto	os, previous in	spection	s), il avallable.		INIA		
Remarks:											
SOILS											
SOILS		Lladlau sik laam					Parine Designed Classe		1.2		
SOILS Map Unit Name):	Hadley silt loam				S	Series Drainage Class:	: Well drained			
SOILS Map Unit Name Taxonomy (Sub	e: ogroup):	Hadley silt loam		6.54		S	Series Drainage Class:	: Well drained			
SOILS Map Unit Name Taxonomy (Sub Profile Descrip); ogroup); otion (Describe to	Hadley silt loam	dicator or confirm th	e absence of in	dicators.) (Type: C=Cor	centration, D=0	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover	: Well drained	Location: PL=Pore U	ning, M=Matrix)	
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	e: ogroup): otion (Describe to Bottom	Hadley silt loam	dicator or confirm the	e absence of in Matrix	dicators.) (Type: C=Cor	centration, D=[Series Drainage Class:	: Well drained red/Coated Sand Grains; Mottles	Location: PL=Pore Li	ning, M=Matrix)	Texture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	e: ogroup): otion (Describe to Bottom	Hadley silt loam	dicator or confirm the	e absence of in Matrix Maist)	dicators.) (Type: C=Cor X 0/2	Centration, D=0	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover	: Well drained redCoated Sand Grains; Mottles	Location: PL=Pore Li	ning, M=Matrix)	Texture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	e: ogroup): otion (Describe to Bottom Depth	Hadley silt loam the depth needed to document the in Horizon	dicator or confirm the	e absence of in Matrix Moist)	dicators.) (Type: C=Cor X %	Centration, D=D	Series Drainage Class: Repletion, RM=Reduced Matrix, CS=Cover Color (Moist)	: Well drained red/Coated Sand Grains; Mottles %	Location: PL=Pore Li	ning, M=Matrix)	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	e: ogroup): tion (Describe to Bottom Depth 4	Hadley silt loam the depth needed to document the in Horizon 1	dicator or confirm the Color (N 10YR	e absence of in Matrix Moist) 3/3	dicators.) (Type: C=Cor X % 100	centration, D=D	Series Drainage Class: Peption, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained redCoated Sand Grains; Mottles %	Location: PL=Pore U	ning, M=Matrix) Location	Texture (e.g. clay, sand, loam) sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4	e: ogroup): otion (Describe to Bottom Depth 4 18	Hadley silt loam the depth needed to document the in Horizon 1 2	dicator or confirm the Color (N 10YR 2.5Y	e absence of in Matrix Moist) 3/3 4/3	dicators.) (Туре: С=Сог К 100 100	centration, D=D	Series Drainage Class: Depleton, RM=Reduced Matrix, CS=Cover Color (Moist)	: Well drained redCoated Sand Grains; Mottles % 	Location: PL=Pore U Type 	ning, M=Matric) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18	e: pogroup): ption (Describe to Bottom Depth 4 18 20	Hadley silt loam the depth needed to document the in Horizon 1 2 3	dicator or confirm the Color (1 10YR 2.5Y 2.5Y	e absence of in Matrix Moist) 3/3 4/3 4/4	dicators.) (Type: C=Cor K 100 100 100	Sentration, D=D	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained red/Coated Sand Grains; 1 Mottles % 	Location: PL=Pore Li Type 	ning, M=Matrix) Location 	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18	e: pgroup): ption (Describe to Bottom Depth 4 18 20	Hadley silt loam the depth needed to document the ins Horizon 1 2 3	dicator or confirm the Color (1 10YR 2.5Y 2.5Y	e absence of in Matrix Moist) 3/3 4/3 4/4	dicators.) (Type: C=Cor X 9% 100 100 100	S noentration, D=D 	Series Drainage Class: Pepteton, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained red/Coated Sand Grains; Mottles % 	Type 	ning, M=Matrix)	Texture (e.g. clay, sand, loam) sandy loam sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	2: ogroup): btion (Describe to Bottom Depth 4 18 20 	Hadley silt loam the depth needed to document the int Horizon 1 2 3 	ficator or confirm the Color (1 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	sfcators.) (Type: C=Cor X 9% 100 100 100 	centration, D=C	Series Drainage Class: Septeton, RM-Reduced Matrix, CS=Cover Color (Moist) 	: Well drained redCoated Sand Grains; Mottles 	Location: PL=Pore U Type 	ning, M=Matrix) Location 	Texture (e.g. clay, sand, loam) sandy loam sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	e: bgroup): btion (Describe to Bottom Depth 4 18 20 	Hadley silt loam the depth needed to document the in Horizon 1 2 3 	dicator or confirm the Color (1 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	dicators.) (Type: C=Cor X 9% 100 100 100 	centration, D=E	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained red.Coated Sand Grains; Mottles 	Location: PL=Pore U Type 	ning, M=Matric) Location 	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	s: pgroup): ption (Describe to Depth 4 18 20 	Hadley silt loam the depth needed to document the In Horizon 1 2 3 	ficator or confirm the Color (N 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	dicators.) (Type: C=Cor X 9% 100 100 100 	S	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained redCoated Sand Grains; Mottles % 	Location: PL=Pore U 	ning, M=Matrix) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	s: group): tion (cescribe to Depth 4 18 20 	Hadley silt loam	ficator or confirm the Color (1 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	dicators.) (Type: C=Cor X 100 100 	S	Series Drainage Class: Septeton, RM-Reduced Matrix, CS=Cover Color (Moist) 	: Well drained red/Coated Sand Grains; Mottles % 	Location: PL=Pore Li Type 	ning, M-Matrix)	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	2: bgroup): btion (Describe to Depth 4 18 20 	Hadley silt loam	ficator or confirm the Color (1 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	dicators.) (Type: C-Cor X 9% 100 100 100 	S	Series Drainage Class: Depleton, RM=Reduced Matrix, CS=Cover Color (Moist) 	: Well drained red:Coated Sand Grains; Mottles 	Location: PL=Pore U Type	ning, M=Matric) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 	s: pgroup): ption (Describe to Bottom Depth 4 18 20 	Hadley silt loam the depth needed to document the in Horizon 1 2 3	dicator or confirm the Color (1 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/3 4/4 	dicators.) (Type: C=Cor X 9% 100 100 100 	Second statements and	Series Drainage Class: Depktion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % 	Location: PL=Pore U Type 	ning, M=Matrix) Location -	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	s: by by b	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he	ficator or confirm the Color (N 10YR 2.5Y 2.5Y 	e absence of in Matrix Moist) 3/3 4/4 ators are	dicators.) (Type: C=Cor X 9% 100 100 100 		Series Drainage Class: Depletion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % 	Location: PL=Pore U s for Proble	ning, M=Matrix) Location matric Soils ¹	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	2: pgroup): tition (Describe to Depth 4 18 20 Soil Field In A1- Histosol	Hadley silt loam	ficator or confirm the Color (1 10YR 2.5Y 2.5Y ere if indice	Advises and the second	dicators.) (Type: C-Cor X 9% 100 100 100 e not present S8 - Polyvalue	Second and the second	Series Drainage Class: Septeton, RM=Reduced Matric, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles -	Location: PL=Pore U Type s for Proble A10 - 2 cm	ning, M=Matrix) Location matic Soils ¹ Vuck (LR.K.L. MLRA 1	Texture (e.g. clay, sand, loam) sandy loam sandy loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric:	s: pgroup): ption (Describe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic El	Hadley silt loam The depth needed to document the ine Horizon 1 2 3 ndicators (check he pipedon	ficator or confirm the Color (1 10YR 2.5Y 2.5Y erre if indica	e absence of ini Matrix Moist) 3/3 4/3 4/4 ators are	dicators.) (Type: C=Cor % % 100 100 100 en ot present S8 - Polyvalue S9 - Thin Dark	scentration, D=C	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % 	Location: PL=Pore U ————————————————————————————————————	ning, M=Matrix) Location matic Soils ¹ Muck (LRR K, L, MLRA 1 Prairie Redx (LRR	Texture (e.g. clay, sand, loam) sandy loam sandy loam 495) K L B
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	s: pgroup): ption (cescribe to Depth 4 18 20 Soil Field In A1- Histosci A2 - Histic E1 A3 - Black H	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic	dicator or confirm the Color (N 10YR 2.5Y ere if indice	e absence of in Matrix Moist) 3/3 4/3 4/4 ators are	dicators.) (Type: C=Cor X 9% 100 100 e not present S8 - Polyvalue S9 - Thin Dark F1 - Loamy Mi	Sentration, D=D 	Series Drainage Class: Depktion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained red/Coated Sand Grains; I Mottles % 	Location: PL=Pore U s for Proble A10 - 2 cm I A16 - Coast S3 - 5 cm Mi	ning, M=Matric) Location matic Soils ¹ Muck (LRR K, L, MRA 1 Prairie Redox (LRR	Texture (e.g. clay, sand, loam) sandy loam sandy loam <
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric:	2: pgroup): tion (Describe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic E A3 - Black H	Hadley silt loam	ficator or confirm the Color (f 10YR 2.5Y 2.5Y ere if indice	e absence of ini Matriz Moist) 3/3 4/3 4/4 ators area	dicatore.) (Type: C=Core % % 100 100 100 e not present \$8 - Polyvalue \$9 - Thin Dark F1 - Loamy Gl	centration, D=0	Series Drainage Class: Septeton, RM=Reduced Matric, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains: Mottles %	Location: PL=Pore Li Type s for Proble A10 - 2 cm l A16 - Coast S3 - 5cm M	ning, M=Matrix) Location matic Soils ¹ Muck (LRR K, L, MLRA 1 Prairie Redox (LRR Lcky Peat of Peat (Texture (e.g. clay, sand, loam) sandy loam sandy loam 496) K, L, R) LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	2: bygroup): btion (Describeto Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier	Hadley silt loam	dicator or confirm the Color (f 10YR 2.5Y 2.5Y ere if indica	e absence of ini Matri: Moist) 3/3 4/3 4/4 ators are	dicators.) (Type: C=Cor × % 100 100 100 enot present \$8 - Polyvalue \$9 - Thin Dark F1 - Loamy MI F2 - Loamy MI F2 - Loamy MI	seentration, D=0	Series Drainage Class: Depkton, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % Indicator	Location: PL=Pore U s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mi S7 - Dark S S8 - Polyval	ning, M=Matrix) Location Muck (LRR K, L, MLRA 1 Prairie Redox (LRR Locky Peat of Peat (Locky Peat of Pea	Техture (e.g. clay, sand, loam) sandy loam sandy loam 496) к. L. R) LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	s: provention (Describe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histo E A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Denlet	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic en Sulfide d Layers ed Below Dark Surface	dicator or confirm the Color (N 10YR 2.5Y 2.5Y ere if indica	e absence of lin Matrix Moist) 3/3 4/3 4/4 ators area	dicators.) (Type: C=Cor X 9% 100 100 100 e not present S8 - Polyvalurk S9 - Thin Dark S9 - Thin Dark F1 - Loamy GI F3 - Depleted): E Below St s Surface fu ucky Mine eyed Matrix matrix rk Surface	Series Drainage Class: Depktion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles %	Location: PL=Pore U s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mi S7 - Dark Si S8 - Polyval S9 - Thin Da	Airg, M=Matric) Location Muck (LRR K, L, MLRA 1 Prairie Redox (LRR cicky Peat of Peat (urface (LRR K, L, M) ue Below Surface (up R L)	Техture (e.g. clay, sand, loam) sandy loam sandy loam 495) к, ц, R) LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	2: pgroup): ption (bescribe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A12 - Thick I	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic an Sulfide d Layers ed Below Dark Surface Dark Surface	ficator or confirm the Color (f 10YR 2.5Y 2.5Y ere if indica	e absence of in Matriz Moist) 3/3 4/3 4/4 ators are 0 0	deatore.) (Type: C=Corr % 100 100 100 e not present S8 - Polyvalue S9 - Thin Dark F1 - Loamy GI F3 - Depleted F6 - Redox Da F7 - Denleted		Series Drainage Class: Pepkton, RM-Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains: Mottles % Indicator	Location: PL=Pore U Type s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm M S7 - Dark S S8 - Polyval S9 - Thin Da S9 - Thin Da	ning, M=Matrix) Location matic Soils ¹ Muck (LRR K, L MLRA 1 Prairie Redox (LRR Cky Peat of Peat (L'Area) ue Below Surface (LRR K, L Messee	Texture (e.g. clay, sand, loam) sandy loam sandy loam <t< td=""></t<>
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric:	2: pgroup): tition (Describe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick El A5 - Stratifier A11 - Deplet A12 - Thick El A13 - Black H	Hadley silt loam the depth needed to document the in Horizon 1 2 3	ficator or confirm the Color (1 10YR 2.5Y 2.5Y ere if indica	e absence of ini Matri: Moist) 3/3 4/3 4/4 ators are	dicatore.) (Type: C-Cor × % 100 100 100 enot present S8 - Polyvalue S9 - Thin Dark F1 - Loamy MI F2 - Loamy MI F2 - Loamy GI F3 - Depleted F6 - Redox Da F7 - Depleted F6 - Redox Da		Series Drainage Class: Depletion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % Indicator	Location: PL=Pore U Type s for Proble A10 - 2 cm I A10 - 2 cm I A10 - 2 cm M S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M	ning, M=Matrio) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam <t< td=""></t<>
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	s: pgroup): ption (Describe to Depth 4 18 20 Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydroge A5 - Stralifie A12 - Thick I S1 - Sandy M S4 - Sandy M	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic an Sulfide d Layers ed Below Dark Surface Dark Surface Dark Surface Lock Mineral Sourd Adviry	dicator or confirm the Color (N 2.5Y 2.5Y ere if indica	e absence of ini Matrix Moist) 3/3 4/3 4/4 ators are	dicators.) (Type: C=Cor % % 100 100 100 enot present S8 - Polyvalue S9 - Thin Dark F1 - Loamy Mr F2 - Loamy GI F3 - Depleted F6 - Redox Da F7 - Depleted F8 - Redox Da	sentration, D=0	Series Drainage Class: Septebon, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % Indicator	Location: PL=Pore U Type s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mi S7 - Dark SI S8 - Polyval S9 - Thin Dz F12 - Iron-M F19 - Piedm	ning, M=Matric) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam 49B) K, L, R) LLRR K, L, R) (LRR K, L, R) S (MLRA 149B) (f 4000
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	s: pgroup): ption (bescribe to Depth 4 18 20 Soil Field In A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifier A12 - Thick I S1 - Sandy M S4 - Sandy M S4 - Sandy M	Hadley silt loam	ficator or confirm the Color (f 10YR 2.5Y ere if indica	e absence of in Matrix Moist) 3/3 4/3 4/4 ators are 0 0 0	deators.) (Type: C=-Cor % % 100 100 100 enot present S8 - Polyvalue S9 - Thin Dark F1 - Loamy GI F3 - Depleted F6 - Redox Da F8 - Redox De		Series Drainage Class: Appleton, RM-Reduced Matrix, CS-Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles %	Solution: PL=Pore U State State <t< td=""><td>ning, M-Matrix) Location </td><td>Texture (e.g. clay, sand, loam) sandy loam sandy loam <t< td=""></t<></td></t<>	ning, M-Matrix) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam <t< td=""></t<>
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric	2: pgroup): tition (Describe to Depth 4 18 20 Soil Field Ir A1- Histosol A2 - Histic Er A3 - Black H A4 - Hydroge A5 - Stratifier A1 - Depletr A1 - Depletr A1 - Depletr A1 - Sandy R S4 - Sandy R S5 - Sandy R S5 - Sandy R	Hadley silt loam	ficator or confirm the Color (1 10YR 2.5Y 2.5Y ere if indice	• absence of ini Matri; Moist) 3/3 4/3 4/4 ators are	diatore.) (Type: C=Cor % % 100 100 100 e not present S8 - Polyvalue S9 - Thin Dark F1 - Loamy Mi F2 - Loamy Gi F3 - Depleted F6 - Redox Da F7 - Depleted F8 - Redox De	Securitation, D=0	Series Drainage Class: Septeton, RM=Reduced Matric, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles %	Location: PL=Pore U Type -	ning, M=Matrio) Location matic Soils ¹ Muck (LRR K, L, MRA t Prairie Redox (LRR Curface (LRR K, L, M) ue Below Surface (LRR K, L, M) ue Below Surface (LRR K, L, M) ue Below Surface (LRR K, L, M) soft Floodplain Soil Spodic (URLA 14A, 1 arent Material Spodic (URLA 14A, 1)	Texture (e.g. clay, sand, loam) sandy loam sandy loam 496) K, L, R) LRR K, L, R) (LRR K, L, R) (LRR K, L, R) S (MLRA 1496) 45, 1496)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 4 18 NRCS Hydric:	s: pgroup): ption (Describe to Depth 4 18 20 Soil Field Ir A1- Histosol A2 - Histic El A3 - Black H A4 - Hydrogg A5 - Stratifier A12 - Thick I S1 - Sandy R S4 - Sandy R S5 - Sandy R S6 - Stripped	Hadley silt loam the depth needed to document the in Horizon 1 2 3 ndicators (check he pipedon istic an Sulfide d Layers ed Below Dark Surface Dark Surface Dark Surface Luck Mineral Sleyed Matrix tedox I Matrix fore on provide the second	dicator or confirm the Color (1 10YR 2.5Y 2.5Y ere if indice	e absence of ini Matri: Moist) 3/3 4/3 4/4 ators are	dicators.) (Type: C=Cor % % 100 100 100 enot present \$8 - Polyvalue \$9 - Thin Dark F1 - Loamy Mi F2 - Loamy Gi F3 - Depleted F6 - Redox Da F7 - Depleted F8 - Redox De	seentration, D=0	Series Drainage Class: Septetion, RM=Reduced Matrix, CS=Cover Color (Moist) -	: Well drained redCoated Sand Grains; Mottles % Indicator	Location: PL=Pore U Type s for Proble A10 - 2 cm 1 A16 - Coast S3 - 5cm Mt S7 - Dark SI S8 - Polyval S9 - Thin Dz F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Far-1)	Airg, M=Matrix) Location	Texture (e.g. clay, sand, loam) sandy loam sandy loam <t< td=""></t<>
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WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site:	Herrick's Cove Road Boat Launch				Wetland ID: Wetland 1 Sample Point U1
VEGETATION	(Species identified in all uppercase are non-nativ	e species.)		
Tree Stratum (F	Plot size: 10 meter radius)	% Cover D	ominant	Ind Status	Dominance Test Worksheet
1	Acer saccharum	10	N	FACIL	Dominance rest worksheet
2	Fagus grandifolia	15	N	FACU	Number of Dominant Species that are OBL_EACW, or EAC: 2 (A)
2.	Ouercus rubra	50	V	FACIL	
J.	Carva ovata	5	N	FACIL	Total Number of Dominant Species Across All Strata: 5 (B)
4.	Prupus sorotina	5	N	FACU	
5.	Fruitus serolina	5	IN	TACO	Percent of Dominant Species That Are OBL EACW/ or EAC: 40.0% (A/B)
7					
7.					Prevalence Index Worksheet
9					Total % Cover of: Multiply by:
10					$\frac{1}{1} \frac{1}{1} \frac{1}$
10.	Total Cover =	85			$FACW son \qquad 0 \qquad x 2 = 0$
		00			$FAC spp \qquad 81 \qquad x 3 = 243$
Sanling/Shrub St	ratum (Plot size: 5 meter radius)				$FACU spp 144 \qquad x 4 = 576$
1.	Lonicera morrowii	40	Y	FACU	UPL spp. 0 $x 5 = 0$
2	Frangula alnus	25	Y	FAC	
3	Comus alternifolia	3	N	FACU	Total 225 (A) 819 (B)
4	-				
5					Prevalence Index = B/A = 3.640
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9					□ Yes □ No Rapid Test for Hydrophytic Vegetation
10.					TYes IN No Dominance Test is > 50%
101	Total Cover =	68			□ Yes I No Prevalence Index is ≤ 3.0 *
					Ves IN Morphological Adaptations (Explain) *
Herb Stratum (P	lot size: 2 meter radius)				Yes I No Problem Hydrophytic Vegetation (Explain) *
1.	Vitis riparia	3	N	FAC	
2.	Parthenocissus quinquefolia	1	N	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Fraxinus americana	15	Y	FACU	present, unless disturbed of problematic.
4.	Amphicarpaea bracteata	3	N	FAC	Definitions of Vegetation Strata:
5.	Equisetum hyemale	50	Y	FAC	
6	-				Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.26 ft. tall.
14.					
15.	-				Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	72			
Moody Vine Stra	tum (Plot size: 10 meter radius)		_		
1					
2					
3					Hydrophytic Vegetation Present Ves No
<u> </u>					
5					
0.	Total Cover =	0			
Remarks:	10141 00101 -	•			

Additional Remarks:

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Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Attachment B – Representative Photographs

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October 19, 2015



Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont

Photo 1. PEM portion of Wetland 1 at Herrick's Cove Road boat launch. Stantec. October 6, 2015.



Photo 2. Herrick's Cove Road boat launch. Stantec. October 6, 2015.



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Reference: Herrick's Cove Road Boat Launch Wetland Delineation Report, Rockingham, Vermont



Photo 3. Aquatic vegetation in cove at Herrick's Cove Road boat launch. Stantec. October 6, 2015.



Photo 4. Wetland sample plot in scrub-shrub wetland. Stantec. October 6, 2015.