



**VT TRANSCO, LLC.
East Avenue Loop Project
Site Location**

**VT TRANSCO, LLC.
East Avenue Loop Project:
Off-ROW Access and RTE
Chittenden County, Vermont
Site Location Map**

June 21, 2007



Sources: Color VT Topographic Maps #315, #316, #415, #416 (1987).



**PIONEER ENVIRONMENTAL ASSOCIATES, LLC.
CONSULTING SCIENTISTS**

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VT TRANSCO, LLC.
East Avenue Loop Project (EAL)
Summary of Off-ROW and ROW Access Routes
Pioneer Environmental Associates, LLC.
June 29, 2007

| ROW Access Number | Off-Right-of-Way Access ID* | PEA Sheet | Town | Proposed Structure Number | Associated Off-ROW Wetlands and Streams | Access Road Type | Investigation Status and Comments |
|-------------------|-----------------------------|--------------|---------------------|--|--|--|--|
| 1 | Essex Farm Access | 1 | Williston | Upslope of Substation | None | Maintained gravel driveway and upland field drive | Investigated |
| 2 | Park Avenue #1 | 2 | Williston | N/S-3 to N/S-4, K-22-3/4, K-23-2 to 3A | 2007-1, 2007-2, 2007-3, 2007-SC-1, 2007-SC-1A, 2007-TB-1 | Maintained gravel drive and upland field drive | Investigated |
| 3 | Dorset Lane #1 | 2, 3 | Williston | N/S-5, K-22-5 | None | Maintained paved roadway and gravel parking lots | Investigated |
| 4 | Dorset Lane #2 | 2, 3 | Williston | N/S-6 | None | Maintained paved roadway and gravel parking lots | Investigated |
| 5 | River Cove Road #1 | 3, 4 | Williston | N/S-7 to N/S-9 | 2007-7, 2007-8, 2007-SC-2, 2006-2, TB-03 | Private, maintained and gated paved road and lawn area | Investigated |
| 6 | On-ROW Access | 5 | Williston | N/S-10 to N/S-11 | None | ROW | Investigated, 2006 |
| 7 | River Cove Road #2 | 5, 6 | Williston | N/S-12 to N/S-14 | None | Maintained gravel road and agriculture field; fenced (planted with corn, 2007) | Investigated |
| 8 | River Cove Road #3 | 6, 7 | Williston | N/S-15, N/S-17 | None | Maintained field drive and agricultural field (planted with corn, 2007) | Investigated |
| 9 | National Guard Ave. #1 | 7 | South Burlington | N/S-18 | None | Maintained park area (lawn) off of maintained gravel road | Investigated |
| 10 | National Guard Ave. #2 | 7 | South Burlington | N/S-19 to N/S-21 | 2007-5, 2007-6 | Gated, maintained farm field access road (field planted with corn, 2007) | Investigated |
| 11 | National Guard Ave. #3 | 8 | South Burlington | N/S-22 to N/S-28 | None | Field drive located in upland | Investigated |
| 12 | Mountain View Blvd. #1 | 8, 9 | South Burlington | N/S-22 to N/S-28 | None | Field drive located in upland | Investigated |
| 13 | On-ROW Access | 10 | South Burlington | N/S-29 | None | Mowed ROW | Investigated, 2006 |
| 14 | On-ROW Access | 10 | South Burlington | N/S-30 to N/S-31 | None | Existing gravel drive and mowed/forested ROW | Investigated, 2006 |
| 15 | Commerce Ave. #1 | 11 | South Burlington | N/S-32 to N/S-33 | None | Paved commercial parking lot and maintained lawn | Investigated |
| 16 | Commerce Ave. #2 | 11 | South Burlington | N/S-32 to N/S-33 | None | Paved commercial parking lot and maintained lawn | Investigated |
| 17 | Commerce Ave. #3 | 11 | South Burlington | N/S-34 | 2006-15 | Paved commercial parking lot and storage yard | Investigated |
| 18 | Commerce Ave. #4 | 11 | South Burlington | N/S-35 | None | Paved commercial parking lot and maintained lawn | Investigated |
| 19 | Commerce Ave. #5 | 12 | South Burlington | N/S-36 | None | Gravel and paved parking and towed-car lot | Investigated |
| 20 | On-ROW Access | 12 | South Burlington | N/S-37 to N/S-38 | None | Mowed ROW | Investigated, 2006 |
| 21 | Airport Pkwy #1 | 13 | South Burlington | N/S-39 to N/S-40 | None | Paved and gravel commercial driveway and upland scrub-shrub area | Investigated |
| 22 | St. Michaels #1 | 14, 14A, 14B | Colchester | N/S-41 | None | Forested area | Investigated |
| 23 | Berard Drive #1 | 14 | South Burlington | N/S-42 | None | Maintained paved and gravel roadway | Investigated |
| 24 | Gorge Road #1 | 15 | Winooski/Colchester | N/S-43 | None | Maintained gravel and paved roadway and RR tracks | Investigated |
| 25 | Winooski Park #1 | 16, 17, 18 | Winooski | N/S-44 to N/S-46 | 2007-4, 2007-9, 2007-10, 2007-11 | Densely forested walking path in Ostrich Fern-Silver Maple Riverine Floodplain Forest | Not Investigated; not likely to be used based on ANR feed-back |
| 26 | Winooski Park #2 | 16, 17 | Winooski | N/S-44 to N/S-46 | 2007-4, 2007-9, 2007-10, 2007-12 | Partially maintained gravel drive and floodplain forest with walking trail; wetland | Investigated |
| 27 | On-ROW Access | 18 | Winooski | N/S-47 to N/S-48 | 2006-24A, 2006-24B, Winooski R2UBH, TB-21, 2006-23 | Winooski River, wetland, maintained scrub-shrub upland in ROW | Investigated, 2006 |
| 28 | S.D. Ireland #1 | 19 | Burlington | N/S-49 to N/S-50 | 2007-12, 2007-SC-4, 2006-26 | Partially maintained S.D. Ireland roadways and infrastructure access; unmaintained woods trail | Investigated |
| 29 | On-ROW Access | 20 | South Burlington | N/S-51 to N/S-52 | None | Mowed and scrub-shrub ROW | Investigated, 2006 |
| 30 | Patchen Road #1 | 20, 21 | South Burlington | N/S-54 to N/S-56 | 2006-28, TB-27 | Dog park and maintained walking trails | Investigated |
| 31 | Patchen Road #1A | 20 | South Burlington | N-53, S-53 | None | Maintained walking trail | Investigated |
| 32 | Centennial Field #1 | 21, 22 | Burlington | N/S-57 | None | Maintained gravel drive | Investigated |
| 33 | Centennial Field #2 | 22 | Burlington | N/S-58 | None | Partially maintained gravel drive and steep embankment | Investigated |

* Off Right-of-way access route alignments based on digital data file received via e-mail from SGC dated 05-21-07 for purpose of field delineations. S.D. Ireland and St. Michaels access routes GPS surveyed in field by PEA. Additional access routes depicted on plans are located within the exiting and proposed right-of-way and were investigated and reported by PEA in 2006.

VT TRANSCO, LLC.
 East Avenue Loop Project - Off-ROW Access
 Summary of Jurisdictional Wetlands
 Pioneer Environmental Associates, LLC
 June 29, 2007

| Wetland Feature Number | PEA Sheet Number | Wetland ID | Town | Total Mapped Area (Sq. ft.) | Class 2 | Class 3 | Transect? | Wetland Vegetation Classification (Cowardin <i>et al.</i> , 1979) | Principle Functions and Values | Fully delineated or extends outside Survey Area/Corridor? | Descriptions and Notes |
|------------------------|------------------|------------|------------------|-----------------------------|---------|---------|-----------|---|--------------------------------|---|---|
| 1 | 2 | 2007-01 | Williston | 18,250 | X | | No | PSS1Y | GW, FF, STP, Nut, W | Extends outside survey corridor | Wetland located along topographic depression; drained by SC-1A/TB-1; contains small open water area with amphibians observed; deer observed within wetland; mapped Class Two wetland |
| 2 | 2 | 2007-02 | Williston | 1,030 | | X | No | PEM1Y | None | Fully Delineated | Wetland located in borrow pit within disturbed area |
| 3 | 2 | 2007-03 | Williston | 2,160 | | X | Yes | PSS1Y | None | Fully Delineated | Wetland located in borrow pit within disturbed area |
| 4 | 17 | 2007-04 | Winooski | 5,720 | X | | No | PEM1Y | STP, Nut | Extends outside survey corridor | Wetland located along access road and adjacent to SC-3 |
| 5 | 7 | 2007-05 | South Burlington | 1,880 | | X | Yes | PSS1Y | GW | Extends outside survey corridor | Wetland a continuation of wetland 2006-09; located near farm field access and corn field |
| 6 | 7 | 2007-06 | South Burlington | 580 | | X | No | PSS1Y | STP | Extends outside survey corridor | Wetland located adjacent to farm field access and corn field; some disturbance from farming related activities; small areas of inundation - no amphibians observed |
| 7 | 4 | 2007-07 | Williston | 1,070 | | X | No | PUB3Hh | STP, Nut, W, V | Extends outside survey corridor | Wetland is an excavated pond located in gently depression along driveway; drained by culvert into SC-2 and 2007-8; amphibian habitat (<i>Rana clamitans</i> - Green Frog) observed and collects STP from surrounding roads, driveways, and residential areas |
| 8 | 4 | 2007-08 | Williston | 130 | | X | No | PEM1Y | STP, Nut | Extends outside survey corridor | Emergent wetland located along SC-2 (outlet of pond - 2007-7); continues outside survey corridor |
| 9 | 17 | 2007-09 | Winooski | 9,940 | X | | Yes | PEM1J | STP, Nut, FF, W | Extends outside survey corridor | Emergent wetland located along SC-3 with a diversity of marsh habitat, proximal to urban area and Winooski River |
| 10 | 17 | 2007-10 | Winooski | 520 | X | | No | PEM1Y | Nut, STP | Extends outside survey corridor | wetland located down slope from urban area, near SC-3 and Winooski River |
| 11 | 16 | 2007-11 | Winooski | 142,900 | X | | No | PEM1J | GW, STP, Nut, FF, SS, W | Extends outside survey corridor | Large emergent wetland dominated by reed canary grass and other emergents |
| 12 | 19 | 2007-12 | Burlington | 51,630 | X | | No | PEM1Y/FO1Yn | STP, W, FF, Nut, SS | Extends outside survey corridor | Wetland located along SC-4 and down slope of cement plant and residential area wetland extends toward Winooski River |

VT TRANSCO, LLC.
 East Avenue Loop Project - Off-ROW Access
 Summary of Jurisdictional Streams and Drainages
 Pioneer Environmental Associates, LLC.
 June 21, 2007

| Drainage Feature Number | PEA Sheet Number | Stream Name | Stream ID | Stream Type | Associated Wetland | Stream Description (Rosgen, D.L., Silvey, H.L., 1996) | Average Ordinary High Water (OHW) Width (Feet) | Notes |
|-------------------------|------------------|------------------------------|------------|--------------|--------------------|---|--|--|
| 1 | 2 | Unnamed Trib. Winooski River | 2007-SC-1 | Ephemeral | 2007-1 | - | 1 | Eroded drainage entering wetland 2007-1 from outside survey corridor |
| 2 | 2 | Unnamed Trib. Winooski River | 2007-SC-1A | Ephemeral | 2007-1 | - | 1 | Drainage located wholly within wetland 2007-1 |
| | 2 | | 2007-TB-1 | Perennial | 2007-1 | Rosgen classification of G4 | 7 | Stream draining wetland 2007-1; continuation of SC-1A; well defined banks, located in gully (5-15+ ft. deep); large amount of refuse; debris; high bank erosion; high embeddedness; same stream as TB-1 located within ROW |
| 3 | 4 | Unnamed Trib. Winooski River | 2007-SC-2 | Ephemeral | 2007-7, 2007-8 | - | 3 | Culverted (18" concrete) outlet to pond (2007-7) located within wetland 2007-8; ill defined banks; organic substrate |
| 4 | 17 | Unnamed Trib. Winooski River | 2007-SC-3 | Perennial | 2007-4, 2007-9 | Rosgen classification of E6 | 10 | Upstream of culvert, stream channel less defined, wetland vegetation in channel, downstream cobble substrate, moderated embeddedness |
| 6 | 19 | Unnamed Trib. Winooski River | 2007-SC-4 | Intermittent | 2007-12 | - | 2.5 | Minor stream, sand substrate, wholly within wetland 2007-12 |

Note: Three ditches, mapped in 2006, were extended in 2007. Please see Wetland, Stream, and RTE Survey Sheets for location. These ditches are not jurisdictional features and thus are not included in this table.



US Army Corps
of Engineers
New England District



Wetland Function-Value Evaluation Form

Wetland I.D. 2007-01

Latitude 44°28'38" N Longitude 73°6'56" W

Prepared by: WSM Date 6/12/07

Wetland Impact: Type N/A Area N/A

Evaluation based on: Office _____ ✓

ES-1-A Corps manual wetland delineation completed? Y ✓ N _____

Total area of wetland 18,250* Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use Commercial, residential, forest, powerline Distance to nearest roadway or other development 50 ft.

Dominant wetland systems present PSS1Y Contiguous undeveloped buffer zone present 20 ft.

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

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

Function/Value Suitability Y N Rationale (Reference #)* Principal Function(s)/Value(s) Comments

| | | | | | | |
|--|----------------------------------|---|---|---------------------------|---|--|
| | Groundwater Recharge/Discharge | ✓ | | 2,4,7,13,15 | ✓ | Groundwater seepage observed; minor inlet and one large outlet suggest groundwater discharge |
| | Floodflow Alteration | ✓ | | 3,4,5,6,7,8,9,13,14,15,18 | ✓ | Wetland receives overland and storm runoff from surrounding residential and commercial development; marginally associated with stormwater basins; detains water |
| | Fish and Shellfish Habitat | | ✓ | 2,8,14,17 | | Fish populations not likely; not observed |
| | Sediment/Toxicant Retention | ✓ | | 1,2,3,4,5,7,8,10,12,16 | ✓ | Wetland likely traps and retains sediment and toxicants from nearby development and roads |
| | Nutrient Removal | ✓ | | 3,4,5,6,7,8,9,10,11,12,14 | ✓ | Wetland is of sufficient size and vegetative community to attenuate nutrients from up-gradient sources |
| | Production Export | ✓ | | 1,2,4,5,7,8,10,12 | | Suitable for export however no flushing or commercially attractive products observed |
| | Sediment/Shoreline Stabilization | ✓ | | 1,2,3,15 | | Wetland contains minor drainage (2007-SC-1A), however is not located adjacent to banks of 2007-TB-1 |
| | Wildlife Habitat | ✓ | | 6,7,8,9,13,14,15,17,20 | ✓ | Although surrounding area is densely developed, wetland provides wildlife corridor and cover. Deer observed, amphibians in ponded area, songbirds, raccoon tracks observed |
| | Recreation | | ✓ | 5,11,12 | | Unlikely used for recreation |
| | Educational/Scientific Value | | ✓ | 5,10,11 | | Limited |
| | Uniqueness/Heritage | | ✓ | 2,8,11,17,19,21,22 | | Limited |
| | Visual Quality/Aesthetics | | ✓ | 3,6,8,9 | | Limited |
| | ES Endangered Species Habitat | | ✓ | | | None observed. |
| | Other | | | | | |

Notes: *Partial delineation

* Refer to backup list of numbered considerations.
Adapted from: U.S. Army Corps of Engineers - New England District, 1998, The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach, NAEEP-360-1-30a.



US Army Corps
of Engineers,
New England District

Wetland Function-Value Evaluation Form

Wetland I.D. 2007-2, 2007-3
 Latitude 44°28'43" Longitude 73°06'58"
 Prepared by: WSM Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A

Total area of wetland See Notes Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No
 Adjacent land use Commercial; Forest; Borrow Pits; Powerline Distance to nearest roadway or other development <100 ft.
 Dominant wetland systems present PEM1Y and PSS1Y Contiguous undeveloped buffer zone present <25 ft.

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Unnamed Trib. Winocski R.
 How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Evaluation based on:

Office _____ Field X
 Corps manual wetland delineation completed? Y X N _____

Function/Value Suitability (Y N) Rationale (Reference #)* Principal Function(s)/Value(s) Comments

| | | | | | | |
|--|----------------------------------|---|--|------------|--|--|
| | Groundwater Recharge/Discharge | X | | 2,4 | | No seeps observed however wetlands located in borrow pit area with gravelly soils, therefore some potential for groundwater recharge |
| | Floodflow Alteration | X | | 4,9 | | Wetlands not associated with a watercourse |
| | Fish and Shellfish Habitat | X | | | | Not associated with a watercourse |
| | Sediment/Toxicant Retention | X | | 1,2,7 | | Wetland may capture some sediment runoff from surrounding uplands, however up-slope watersheds are small |
| | Nutrient Removal | X | | 3,4,5,9,10 | | Wetlands not suitable for significant nutrient removal or attenuation; moderate vegetation density |
| | Production Export | X | | 12 | | Very limited |
| | Sediment/Shoreline Stabilization | X | | 3,4 | | Not associated with a persistent watercourse |
| | Wildlife Habitat | X | | 7,8 | | Limited; one deer observed in nearby wetland 2007-1 |
| | Recreation | X | | 12 | | Limited; poor access |
| | Educational/Scientific Value | X | | 9,10 | | Wetlands slightly degraded |
| | Uniqueness/Heritage | X | | 8,10,17 | | Borrow pit wetlands |
| | Visual Quality/Aesthetics | X | | | | Limited |
| | ES Endangered Species Habitat | X | | | | None observed |
| | Other | | | | | |

Notes: * 2007-2 = 1,030 SF
 2007-3 = 2,160 SF

* Refer to backup list of numbered considerations.
 Adapted from: U.S. Army Corps of Engineers - New England District, 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.



US Army Corps
of Engineers
New England District



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Wetland Function-Value Evaluation Form

Total area of wetland see notes Human made? No* Is wetland part of a wildlife corridor? Yes or a "habitat island"? No

Adjacent land use park land Distance to nearest roadway or other development 150 ft.

Dominant wetland systems present PEM1Y Contiguous undeveloped buffer zone present 100 ft.

Is the wetland a separate hydraulic system? No if not, where does the wetland lie in the drainage basin? proximal to SC-3

How many tributaries contribute to the wetland? None. Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 2007-4, 2007-10

Latitude 44°29'26" Longitude 73°10'50"

Prepared by: ROC Date 6/21/07

Wetland Impact:

Type N/A Area N/A

Evaluation based on:

Office _____ Field X

Corps manual wetland delineation completed? Y X N _____

| Function/Value | Suitability Y N | Rationale (Reference #)* | Principal Function(s)/Value(s) | Comments |
|----------------------------------|--------------------|-----------------------------|-----------------------------------|---|
| Groundwater Recharge/Discharge | X | 4 | | Minimal groundwater recharge from wetland |
| Floodflow Alteration | X | 5,6 | | Not associated with a persistent watercourse |
| Fish and Shellfish Habitat | X | 2 | | Not associated with a watercourse |
| Sediment/Toxicant Retention | X | 1,2,3,4 | X | Surrounding land is urbanized |
| Nutrient Removal | X | 3,4,5,9,11 | X | Sources located above wetland in watershed (e.g. cornfield) |
| Production Export | X | 12 | | Very limited |
| Sediment/Shoreline Stabilization | X | 3 | | Not associated with a persistent watercourse |
| Wildlife Habitat | X | 3,5,7,8 | | Limited |
| Recreation | X | 1,11,12 | | Limited; small wetlands |
| Educational/Scientific Value | X | 6,9 | | Wetland lacks educational value due to size and composition |
| Uniqueness/Heritage | X | 1,22 | | Lacks unique qualities |
| Visual Quality/Aesthetics | X | 9 | | Minimal visual appeal of wetlands |
| ES Endangered Species Habitat | X | | | None observed |
| Other | | | | |

Notes: 2007-4 - 5720 sq ft, 2007-10 520 sq feet

* Refer to backup list of numbered considerations.
Adapted from: U.S. Army Corps of Engineers - New England District, 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.



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Wetland Function-Value Evaluation Form

Wetland I.D. 2007-5
 Latitude 44°28'30" Longitude 73°8'19"
 Prepared by: ROC Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A
 Evaluation based on:
 Office Field
 Corps manual wetland delineation completed?

Total area of wetland 1,880 SF Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No
 Adjacent land use Forest; recreational; riverine Distance to nearest roadway or other development 100 ft.
 Dominant wetland systems present PSS1Y Contiguous undeveloped buffer zone present 100 ft.

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Unnamed Trib., Winoski R.
 How many tributaries contribute to the wetland? None. Wildlife & vegetation diversity/abundance (see attached list)

| Function/Value | Suitability Y N | Rationale (Reference #)* | Principal Function(s)/Value(s) | Comments |
|--------------------------------------|-------------------------------------|-----------------------------|-------------------------------------|---|
| Groundwater Recharge/Discharge | <input checked="" type="checkbox"/> | 4,10,13,15 | <input checked="" type="checkbox"/> | Active groundwater seeps observed contributing to wetland |
| Floodflow Alteration | <input checked="" type="checkbox"/> | 3,5,6,9 | | Not associated with a persistent watercourse; may receive runoff from corn field located up-slope |
| Fish and Shellfish Habitat | <input checked="" type="checkbox"/> | 2 | | Not associated with a watercourse |
| Sediment/Toxicant Retention | <input checked="" type="checkbox"/> | 1,2,4 | | Likely runoff during heavy precipitation events from corn field located adjacent to wetland |
| Nutrient Removal | <input checked="" type="checkbox"/> | 3,4,5,9,10 | | Sources located above wetland in watershed (e.g. cornfield) |
| Production Export | <input checked="" type="checkbox"/> | 12 | | Very limited |
| Sediment/Shoreline Stabilization | <input checked="" type="checkbox"/> | 3 | | Not associated with a persistent watercourse |
| Wildlife Habitat | <input checked="" type="checkbox"/> | 3,5,7,8 | | Limited |
| Recreation | <input checked="" type="checkbox"/> | 12 | | Limited; poor access |
| Educational/Scientific Value | <input checked="" type="checkbox"/> | 2,11 | | Poor access |
| Uniqueness/Heritage | <input checked="" type="checkbox"/> | 11,22 | | Poor access |
| Visual Quality/Aesthetics | <input checked="" type="checkbox"/> | 6 | | Minimal diversity within wetland |
| ES Endangered Species Habitat | <input checked="" type="checkbox"/> | | | None observed |
| Other | | | | |

Notes: Wetland is extension of wetland 2006-09 delineated within the ROW in 2006
 * Refer to backup list of numbered considerations.
 Adapted from: U.S. Army Corps of Engineers - New England District. 1999. The Highway Methodology Workbook: Supplement. Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.



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Wetland Function-Value Evaluation Form

Wetland I.D. 2007-6
 Latitude 44°28'29" Longitude 73°08'18"
 Prepared by: ROC Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A

Total area of wetland 580 SF Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? No
 Adjacent land use Forest; farmland Distance to nearest roadway or other development 100 ft.
 Dominant wetland systems present PSS1Y Contiguous undeveloped buffer zone present 100 ft.

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Unnamed Trib. Wincooski R.
 How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Evaluation based on:
 Office Field
 Corps manual wetland delineation completed? Y N

Function/Value Suitability (Y/N) Rationale (Reference #)* Principal Function(s)/Value(s) Comments

| | | | |
|----------------------------------|---|------------|---|
| Groundwater Recharge/Discharge | X | 4 | wetland has potential for groundwater recharge |
| Floodflow Alteration | X | 5,6,9 | Not associated with a persistent watercourse; may receive runoff from corn field located up-slope |
| Fish and Shellfish Habitat | X | 2 | Not associated with a watercourse |
| Sediment/Toxicant Retention | X | 1,2,5 | Likely runoff during heavy precipitation events from corn field located adjacent to wetland |
| Nutrient Removal | X | 3,4,5,9,10 | Sources located above wetland in watershed (e.g. cornfield) |
| Production Export | X | 1,12 | Very limited |
| Sediment/Shoreline Stabilization | X | 3 | Not associated with a persistent watercourse |
| Wildlife Habitat | X | 5,7,8 | Limited |
| Recreation | X | | Limited; poor access |
| Educational/Scientific Value | X | | Minimal |
| Uniqueness/Heritage | X | 17 | Minimal |
| Visual Quality/Aesthetics | X | 6 | Minimal diversity within wetland |
| ES Endangered Species Habitat | X | | None observed |
| Other | | | |

Notes: Partial Delineation - extends outside survey area

* Refer to backup list of numbered considerations.
 Adapted from: U.S. Army Corps of Engineers - New England District, 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach, NAEEP-360-1-30a.



Wetland Function-Value Evaluation Form

Wetland I.D. 2007-7
 Latitude 44°28'30" Longitude 73°7'21"
 Prepared by: ROC Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A

Total area of wetland 1,070 sf Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No
 Adjacent land use mowed field, driveway Distance to nearest roadway or other development <50 ft.
 Dominant wetland systems present PUB3Hh Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? along sc-2, mid drainage
 How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

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

Function/Value Suitability Y N Rationale (Reference #)* Principal Function(s)/Value(s) Comments

| | | | | | |
|----------------------------------|---|--|-------------------|---|---|
| Groundwater Recharge/Discharge | X | | 7,9 | | Wetland stores water and has potential for groundwater recharge |
| Floodflow Alteration | X | | 3,7,9,10,13,15,16 | | The pond outlet regulates water level and limits the pond from holding additional water |
| Fish and Shellfish Habitat | X | | 4,5,10,14 | | Potential for fish production |
| Sediment/Toxicant Retention | X | | 1,2,3,10,12 | X | Wetland likely removes sediment from stream due to quiescent conditions |
| Nutrient Removal | X | | 3,4,5,10,13,14 | X | Wetland likely removes nutrients with sediment though limited by lack of vegetation |
| Production Export | X | | 4,5 | | Limited |
| Sediment/Shoreline Stabilization | X | | 3,4,9 | | Lack of wetland vegetation along banks limit stabilization potential |
| Wildlife Habitat | X | | 3,17,19,20,23 | X | Amphibian use present |
| Recreation | X | | 5 | | Limited; small pond on private land |
| Educational/Scientific Value | X | | | | Low quality wetland habitat |
| Uniqueness/Heritage | X | | | | Lacks unique qualities |
| Visual Quality/Aesthetics | X | | 6,7,8,9 | X | Pond likely created for aesthetic reasons |
| ES Endangered Species Habitat | X | | | | None observed |
| Other | | | | | |

Notes: Wetland is a bermed pond constructed by impounding a small stream (sc-2)

* Refer to backup list of numbered considerations.

Adapted from: U.S. Army Corps of Engineers - New England District. 1999. The Highway Methodology Workbook: Supplement. Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.



US Army Corps
of Engineers
New England District

Wetland Function-Value Evaluation Form

Wetland I.D. 2007-8
 Latitude 44°28'30" Longitude 73°07'22"
 Prepared by: ROC Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A
 Evaluation based on:
 Office Field X
 Corps manual wetland delineation
 completed? Y X N

Total area of wetland 130 sf Human made? no Is wetland part of a wildlife corridor? No or a "habitat island"? No
 Adjacent land use mowed field, driveway Distance to nearest roadway or other development <75 ft.
 Dominant wetland systems present PEM1Y Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? No if not, where does the wetland lie in the drainage basin? along sc-2, mid drainage
 How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

| Function/Value | Suitability | | Rationale (Reference #)* | Principal Function(s)/Value(s) | Comments |
|----------------------------------|-------------|---|-----------------------------|-----------------------------------|--|
| | Y | N | | | |
| Groundwater Recharge/Discharge | X | | 7,9 | | Wetland has potential for groundwater recharge |
| Floodflow Alteration | X | | 3 | | Wetland is too small to have major effect on floodflow |
| Fish and Shellfish Habitat | X | | 2 | | None |
| Sediment/Toxicant Retention | X | | 1,2,10,16 | X | Wetland likely removes sediment from stream during high flow |
| Nutrient Removal | X | | 3,4,8,9,10 | X | Wetland likely removes nutrients through vegetation uptake |
| Production Export | X | | | | Limited |
| Sediment/Shoreline Stabilization | X | | 3,4,9 | | Banks along stream are densely vegetated |
| Wildlife Habitat | X | | 5,13 | | Size of wetland limits habitat potential |
| Recreation | X | | | | None |
| Educational/Scientific Value | X | | 11,13 | | Low quality wetland habitat |
| Uniqueness/Heritage | X | | | | Lacks unique qualities |
| Visual Quality/Aesthetics | X | | 7,9 | | Very limited |
| ES Endangered Species Habitat | X | | | | None observed |
| Other | | | | | |

Notes: Wetland is a bermed pond constructed by impounding a small stream (sc-2)

* Refer to backup list of numbered considerations.
 Adapted from: U.S. Army Corps of Engineers - New England District, 1999. The Highway
 Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive
 Approach. NAEEP-360-1-30a.



US Army Corps
of Engineers
New England District



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www.parkerenv.com

Wetland Function-Value Evaluation Form

Wetland I.D. 2007-9
Latitude 44°29'26" Longitude 73°10'50"
Prepared by: ROC Date 6/21/07
Wetland Impact:
Type _____ Area _____

Total area of wetland 9940 SF* Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No
Adjacent land use Urban area, forest, road Distance to nearest roadway or other development <75 ft.
Dominant wetland systems present PEM1J Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Lower
How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Evaluation based on:
Office Field
Corps manual wetland delineation completed? Y N

Function/Value Suitability Rationale Principal Function(s)/Value(s) Comments

| Function/Value | Suitability Y N | Rationale (Reference #)* | Principal Function(s)/Value(s) | Comments |
|----------------------------------|--------------------|-----------------------------|-----------------------------------|---|
| Groundwater Recharge/Discharge | X | 7, 15 | | SC-3 flows through the wetland |
| Floodflow Alteration | X | 1,4,5,6,7,8,10,14,15,18 | X | Wetland extends along SC-3 and is located in an urbanized watershed |
| Fish and Shellfish Habitat | X | 8,10,12,14,16,17 | | Suitable habitat for small fish, minnows observed during visit |
| Sediment/Toxicant Retention | X | 1,2,3,4,5,10,11,14,16 | X | Located within urbanized watershed at low gradient along stream |
| Nutrient Removal | X | 3,4,5,8,9,10,11 | X | Wetland dominated by fast growing emergent vegetation |
| Production Export | X | 6,7,10,12 | | Minimal due to plant composition and location in urbanized watershed |
| Sediment/Shoreline Stabilization | X | 3,4,9,12,13,15 | | Dense emergent vegetation provides stabilization along SC-3 |
| Wildlife Habitat | X | 6,8,11,13,20,21 | X | Wetland may provide habitat in urbanized environment and is close to Winooski River |
| Recreation | X | 1,5,11,12 | | Wetland is located in an area of the natural area away from established hiking trails |
| Educational/Scientific Value | X | 5,6,9,11 | | More educational, diverse and accessible wetlands are located within park |
| Uniqueness/Heritage | X | 1,2,5,7,8,10,19,22 | | Wetland has numerous invasive plants and is typical of area wetlands in composition |
| Visual Quality/Aesthetics | X | 2,8,9,12 | | Visible from road, yet not aesthetically unique |
| Endangered Species Habitat | X | | | None observed |
| Other | | | | |

Notes: * Partial Delineation; Wetland extends beyond survey area
Adapted from: U.S. Army Corps of Engineers - New England District. 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.

** Refer to backup list of numbered considerations.



US Army Corps
of Engineers
New England District



Wetland Function-Value Evaluation Form

Wetland I.D. 2007-11
 Latitude 44°29'25" Longitude 73°10'38"
 Prepared by: WSM Date 6/12/07
 Wetland Impact:
 Type N/A Area N/A

Evaluation based on:
 Office Field
 Corps manual wetland delineation
 completed? Y X N

Total area of wetland 142,900* Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? Yes
 Adjacent land use Commercial, residential, forest, powerline Distance to nearest roadway or other development 200 ft.
 Dominant wetland systems present: PEM1J Contiguous undeveloped buffer zone present <100 ft.
 Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Winooski River
 How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

| Function/Value | Suitability | | Rationale (Reference #)* | Principal Function(s)/Value(s) | Comments |
|----------------------------------|-------------------------------------|--------------------------|---------------------------------------|-------------------------------------|--|
| | Y | N | | | |
| Groundwater Recharge/Discharge | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3,4,7,13,15 | <input checked="" type="checkbox"/> | Some groundwater discharge observed around periphery of the system; potential for limited recharge |
| Floodflow Alteration | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,3,4,5,6,7,8,9,10,11,12,13,14,18 | <input checked="" type="checkbox"/> | Wetland is an active and important floodplain for the lower Winooski River |
| Fish and Shellfish Habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2,3,4,5,6,7,8,9,10,12,14,17 | | May be some potential for limited populations of fish to utilize wetland during flooding events |
| Sediment/Toxicant Retention | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,2,3,4,5,7,8,10,12,13,14,15,16 | <input checked="" type="checkbox"/> | Wetland likely traps and retains sediment and toxicants from nearby development and roads |
| Nutrient Removal | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,2,3,4,5,6,7,8,9,10,11,12,13,14 | <input checked="" type="checkbox"/> | Wetland is of sufficient size and vegetative community to attenuate nutrients from up-gradient sources and flood waters |
| Production Export | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,2,4,6,5,7,8,9,10 | | Suitable for export however no flushing or commercially attractive products observed |
| Sediment/Shoreline Stabilization | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,2,3,4,5,6,7,9,10,12,13,14,15 | <input checked="" type="checkbox"/> | Wetland is located adjacent to the Winooski River and provides sediment and shoreline stabilization for the riverbanks |
| Wildlife Habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,3,8,9,10,11,12,13,14,15,18,19,20,21 | <input checked="" type="checkbox"/> | Waterfowl observed on numerous site visits; likely large amphibian populations and other terrestrial or semi-aquatic species (e.g. muskrat, river otter, etc.) |
| Recreation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,4,5,7,9,10,11,12 | | Potential for some limited recreation opportunities |
| Educational/Scientific Value | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2,4,5,8,9,10,11,13 | | Relatively accessible with hiking trails; close to Burlington/Winooski |
| Uniqueness/Heritage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1,5,6,7,8,9,10,11,13,14,17,19 | | Wetland is a large feature located in highly visible location, however wetland type not unusual or unique |
| Visual Quality/Aesthetics | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2,3,8,9,10,11,12 | | Highly visible, however dominated by invasive species like cattail and Fragmites |
| Endangered Species Habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | None observed. |
| Other | | | | | |

Notes: *Partial delineation

* Refer to backup list of numbered considerations.
 Adapted from: U.S. Army Corps of Engineers - New England District. 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach. NAEPP-360-1-30a.



U.S. Army Corps
of Engineers
New England District

Wetland Function-Value Evaluation Form

Wetland I.D. 2007-12
 Latitude 44°28'58" Longitude 73°10'48"
 Prepared by: WSM Date 6/21/07
 Wetland Impact:
 Type N/A Area N/A

Total area of wetland 51,630* Human made? No Is wetland part of a wildlife corridor? Yes or a "habitat island"? Yes
 Adjacent land use Commercial, residential, forest, powerline Distance to nearest roadway or other development <100 ft.
 Dominant wetland systems present PEM1Y/FO1Yn Contiguous undeveloped buffer zone present <100 ft.

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Winooski River
 How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

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

Function/Value Suitability Y N Rationale (Reference #)* Principal Function(s)/Value(s) Comments

| | | | | | | |
|--|----------------------------------|---|--|---------------------------|---|---|
| | Groundwater Recharge/Discharge | X | | 2,7,13,15 | | Groundwater discharge observed along upslope boundary of wetland |
| | Floodflow Alteration | X | | 3,4,5,6,8,9,10,11,13 | X | Wetland is an active floodplain for the lower Winooski River |
| | Fish and Shellfish Habitat | X | | 1,2,8,14,17 | | Wetland does not contain appropriate habitat for fish or shellfish |
| | Sediment/Toxicant Retention | X | | 1,2,4,5,6,7,8,10,14,16 | X | Wetland likely traps and retains sediment and toxicants from nearby commercial/industrial development |
| | Nutrient Removal | X | | 3,4,5,6,7,8,9,10,11,12,14 | X | Wetland is of sufficient size and vegetative community to attenuate nutrients from up-gradient sources and flood waters |
| | Production Export | X | | 1,4,5,7,8,12 | | Suitable for export however no flushing or commercially attractive products observed |
| | Sediment/Shoreline Stabilization | X | | 1,2,3,4,14 | | Wetland is located adjacent to the Winooski River and provides sediment and shoreline stabilization for the riverbanks |
| | Wildlife Habitat | X | | 7,8,9,10,11,13,15 | X | Wetland is suitable for waterfowl, deer, and other wildlife |
| | Recreation | X | | 5,8,12 | | Potential for some limited recreation opportunities however access is restricted or limited |
| | Educational/Scientific Value | X | | 3,5,10 | | Limited access to wetland |
| | Uniqueness/Heritage | X | | 2,5,7,11,12,16,17,19 | | Wetland large, however relatively common throughout the lower Winooski River valley |
| | Visual Quality/Aesthetics | X | | 1,2,3,8 | | Limited |
| | ES Endangered Species Habitat | X | | | | None observed. |
| | Other | | | | | |

Notes: *Partial delineation

* Refer to backup list of numbered considerations.

Adapted from: U.S. Army Corps of Engineers - New England District. 1999. The Highway Methodology Workbook: Supplement: Wetland Functions and Values - A Descriptive Approach. NAEEP-360-1-30a.

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-3A**

Project/Site: **VT Transco EAL Access and RTE**
 Applicant/Owner: **VT Transco**
 Investigator: **WSM/ROC/DJP**

Date: **May 21, 2007**
 County: **Chittenden**
 State: **VT**

Do normal circumstances exist on the site?
 Is the site significantly disturbed (Atypical Situation)?
 Is the area a potential problem area?

Community ID: **Wetland**
 Station ID: **1**
 Plot ID: **A**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|---------------------------|-----------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Rubus pubescens</i> | Blackberry,Dwarf | 15 | FACW |
| | <i>Solidago rugosa</i> | Goldenrod, Rough-stem | 5 | FAC |
| X | <i>Lythrum salicaria</i> | Loosestrife,Purple | 30 | OBL |
| X | <i>Onoclea sensibilis</i> | Fern,Sensitive | 30 | FACW |

% Species that are OBL, FACW, or FAC (except FAC-): **100**

Cowardin Classification: **PSS1Y**

Remarks

Shrubs/Trees: None

Hydrology

Recorded Data (describe in remarks)
 Stream, Lake, or Tide Gage
 Aerial Photograph
 Other (describe in remarks)

Primary Wetland Hydrology Indicators

Inundated
 Saturated in upper 12 inches
 Water marks
 Drift lines
 Sediment deposits
 Drainage patterns in wetlands

Secondary Hydrology Indicators

Oxidized root channels
 Water-stained leaves
 Local soil survey data
 FAC-Neutral test
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): **0**
 Depth to Free Water in Pit(in.): **5**
 Depth to Saturated Soils(in.): **0**

Remarks

Total Precipitation for May, 2007 (NOAA, Burlington): 1.95 inches
 Normal Precipitation for May: 3.32 inches
 Total Precipitation in five days preceding delineation: 1.25 inches

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|-----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 1-18 | A/B | 2.5Y 4/2 | 10YR 6/6 | many | prominent | Coarse Sand pebbles |
| 0-1 | O | 5Y 2.5/1 | | | | |

Hydric Soils Indicators

Histosol
 Histic Epipedon
 Sulfidic Odor
 Probable Aquatic Moist Regime
 Reducing Conditions
 Gleyed or Low-Chroma Colors
 Concretions
 High Organic % in Surface Layer in Sandy Soils
 Organic Streaking in Sandy Soils
 Listed on Local Hydric Soils List
 Listed on National Hydric Soils List
 Other (explain in remarks)

Unit Name: **Borrow Pits**

Taxonomy:

Drainage Class:

Field Observations match map

Remarks

1987 Manual: Not hydric
 NRCS Indicator: Hydric, VI
 Redoximorphic features begin at: 2 inches

Wetland Determination

Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
 This Data Point is a Wetland

Remarks

Site located in Borrow Pit areas as mapped by NRCS and as observed in the field.

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-3B**

Project/Site: **VT Transco EAL Access and RTE** Date: **May 21, 2007**
 Applicant/Owner: **VT Transco** County: **Chittenden**
 Investigator: **WSM/ROC/DJP** State: **VT**
 [True] Do normal circumstances exist on the site? Community ID: **Upland**
 [True] Is the site significantly disturbed (Atypical Situation)? Station ID: **1**
 [False] Is the area a potential problem area? Plot ID: **B**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|------------------------------|----------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Fragaria virginiana</i> | Strawberry, Virginia | 10 | FACU |
| | <i>Solidago canadensis</i> | Golden-Rod, Canada | 20 | FACU |
| X | <i>Anthoxanthum odoratum</i> | Grass, Sweet Vernal | 60 | FACU |
| X | <i>Daucus carota</i> | Queen Anne's Lace | 30 | UPL |

% Species that are OBL, FACW, or FAC (except FAC-): **0**

Cowardin Classification:

Remarks

Shrubs/Trees: None

Hydrology

| | Primary Wetland Hydrology Indicators | Secondary Hydrology Indicators |
|--|--------------------------------------|--------------------------------|
| [X] Recorded Data (describe in remarks) | [] Inundated | [] Oxidized root channels |
| [] Stream, Lake, or Tide Gage | [X] Saturated in upper 12 inches | [] Water-stained leaves |
| [] Aerial Photograph | [] Water marks | [] Local soil survey data |
| [X] Other (describe in remarks) | [] Drift lines | [] FAC-Neutral test |
| Field Observations: | [] Sediment deposits | [] Other (explain in remarks) |
| Depth of Surface Water(in.): 0 | [] Drainage patterns in wetlands | |
| Depth to Free Water in Pit(in.): 13 | | |
| Depth to Saturated Soils(in.): 6 | | |

Remarks

Total Precipitation for May, 2007 (NOAA, Burlington): 1.95 inches
 Normal Precipitation for May: 3.32 inches
 Total Precipitation in five days preceding delineation: 1.25 inches

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 0-2 | A | 7.5YR 2.5/3 | | | | Coarse Sand pebbles |
| 2-18 | B | 2.5Y 4/3 | | | | Coarse Sand pebbles |

Hydric Soils Indicators

- | | |
|-----------------------------------|--|
| [] Histosol | [] Concretions |
| [] Histic Epipedon | [] High Organic % in Surface Layer in Sandy Soils |
| [] Sulfidic Odor | [] Organic Streaking in Sandy Soils |
| [] Probable Aquatic Moist Regime | [] Listed on Local Hydric Soils List |
| [] Reducing Conditions | [] Listed on National Hydric Soils List |
| [] Gleyed or Low-Chroma Colors | [] Other (explain in remarks) |

Unit Name: **Borrow Pits**

Taxonomy:

Drainage Class:

[] Field Observations match map

Remarks

1987 Manual: Not Hydric
 NRCS Indicator: None
 Redoximorphic features begin at: None

Wetland Determination

[False] Hydrophytic Vegetation Present [False] This Data Point is a Wetland
 [False] Hydric Soils Present
 [True] Wetland Hydrology Present

Remarks

Site located in Borrow Pit areas as mapped by NRCS and as observed in the field.

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-5A**

Project/Site: **VT Transco EAL Access and RTE**
 Applicant/Owner: **VT Transco**
 Investigator: **WSM/ROC**

Date: **May 21, 2007**
 County: **Chittenden**
 State: **VT**

Do normal circumstances exist on the site?
 Is the site significantly disturbed (Atypical Situation)?
 Is the area a potential problem area?

Community ID: **Wetland**
 Station ID: **1**
 Plot ID: **A**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|-------------------------------|---------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Onoclea sensibilis</i> | Fern,Sensitive | 10 | FACW |
| | <i>Athyrium filix-femina</i> | Fern,Subarctic Lady | 10 | FAC |
| | <i>Cornus stolonifera</i> | Dogwood,Red-Osier | 10 | FACW+ |
| X | <i>Osmunda cinnamomea</i> | Fern,Cinnamon | 40 | FACW |
| Shrub | | | | |
| X | <i>Alnus rugosa</i> | Alder,Speckled | 25 | FACW+ |
| X | <i>Salix bebbiana</i> | Willow,Bebb | 25 | FACW |
| Tree | | | | |
| | <i>Acer negundo</i> | Box-Elder | 25 | FAC+ |
| X | <i>Fraxinus pennsylvanica</i> | Ash,Green | 70 | FACW |
| X | <i>Acer rubrum</i> | Maple,Red | 40 | FAC |

% Species that are OBL, FACW, or FAC (except FAC-): **100**

Cowardin Classification: **PSS1Y**

Remarks

Hydrology

- Recorded Data (describe in remarks)
- Stream, Lake, or Tide Gage
- Aerial Photograph
- Other (describe in remarks)

Primary Wetland Hydrology Indicators

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

Secondary Hydrology Indicators

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): **0**
 Depth to Free Water in Pit(in.): **14**
 Depth to Saturated Soils(in.): **8**

Remarks

Total Precipitation for May, 2007 (NOAA, Burlington): 1.95 inches
 Normal Precipitation for May: 3.32 inches
 Total Precipitation in five days preceding delineation: 1.25 inches

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|-----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 0-5 | A | 2.5Y 3/2 | | | | Loam roots |
| 5-17 | B | GLE Y1 5/10Y | 7.5YR 4/6 | many | prominent | Clay Loam |

Hydric Soils Indicators

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer in Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Unit Name: **Adams & Windsor Loamy Sands**
 Drainage Class: **Excessively Drained**

Taxonomy: **Typic Haplorthods/Udipsamments**
 Field Observations match map

Remarks

1987 Manual: Not hydric
 NRCS Indicator: Hydric, VI
 Redoximorphic features begin at: 5

Wetland Determination

Hydrophytic Vegetation Present
 Hydric Soils Present
 Wetland Hydrology Present
 This Data Point is a Wetland

Remarks

Wetland a continuation of Wetland 2006-09.

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-5B**

Project/Site: **VT Transco EAL Access and RTE**
 Applicant/Owner: **VT Transco**
 Investigator: **WSM/ROC**

Date: **May 21, 2007**
 County: **Chittenden**
 State: **VT**

[True] Do normal circumstances exist on the site?
 [False] Is the site significantly disturbed (Atypical Situation)?
 [False] Is the area a potential problem area?

Community ID: **Upland**
 Station ID: **1**
 Plot ID: **B**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|-------------------------------|--------------------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Onoclea sensibilis</i> | Fern,Sensitive | 20 | FACW |
| | <i>Equisetum arvense</i> | Horsetail,Field | 10 | FAC |
| X | <i>Erythronium americanum</i> | Lily,Trout | 40 | UPL |
| X | <i>Anemone quinquefolia</i> | Thimble-Weed,American Woodland | 40 | FACU |
| Shrub | | | | |
| X | <i>Quercus rubra</i> | Oak,Northern Red | 10 | FACU- |
| X | <i>Acer rubrum</i> | Maple,Red | 25 | FAC |
| X | <i>Acer pensylvanicum</i> | Maple,Striped | 10 | FACU |
| Tree | | | | |
| X | <i>Quercus rubra</i> | Oak,Northern Red | 60 | FACU- |
| X | <i>Acer rubrum</i> | Maple,Red | 40 | FAC |

% Species that are OBL, FACW, or FAC (except FAC-): **28**

Cowardin Classification:

Remarks

Hydrology

[X] Recorded Data (describe in remarks)
 [] Stream, Lake, or Tide Gage
 [] Aerial Photograph
 [X] Other (describe in remarks)

Primary Wetland Hydrology Indicators

[] Inundated
 [] Saturated in upper 12 inches
 [] Water marks
 [] Drift lines
 [] Sediment deposits
 [] Drainage patterns in wetlands

Secondary Hydrology Indicators

[X] Oxidized root channels
 [] Water-stained leaves
 [] Local soil survey data
 [] FAC-Neutral test
 [] Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): **None**
 Depth to Free Water in Pit(in.): **>20**
 Depth to Saturated Soils(in.): **15**

Remarks

Total Precipitation for May, 2007 (NOAA, Burlington): 1.95 inches
 Normal Precipitation for May: 3.32 inches
 Total Precipitation in five days preceding delineation: 1.25 inches

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|-----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 0-10 | A | 10YR 3/2 | | | | Loam |
| 10-18 | B | 5Y 5/2 | 10R 4/6 | many | prominent | Fine Sandy Loam |

Hydric Soils Indicators

[] Histosol
 [] Histic Epipedon
 [] Sulfidic Odor
 [] Probable Aquatic Moist Regime
 [] Reducing Conditions
 [X] Gleyed or Low-Chroma Colors
 [] Concretions
 [] High Organic % in Surface Layer in Sandy Soils
 [] Organic Streaking in Sandy Soils
 [] Listed on Local Hydric Soils List
 [] Listed on National Hydric Soils List
 [] Other (explain in remarks)

Unit Name: **Adams & Windsor Loamy Sands**
 Drainage Class: **Excessively Drained**

Taxonomy: **Typic Haplorthods/Udipsamments**
 [] Field Observations match map

Remarks

1987 Manual: Not hydric
 NRCS Indicator: Hydric, VI
 Redoximorphic features begin at: 10

Wetland Determination

[False] Hydrophytic Vegetation Present
 [True] Hydric Soils Present
 [False] Wetland Hydrology Present
 [False] This Data Point is a Wetland

Remarks

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-9A**

Project/Site: **VT Transco EAL Access and RTE**
 Applicant/Owner: **VT Transco**
 Investigator: **ROC**

Date: **June 20, 2007**
 County: **Chittenden**
 State: **VT**

[True] Do normal circumstances exist on the site?
 [False] Is the site significantly disturbed (Atypical Situation)?
 [False] Is the area a potential problem area?

Community ID: **Wetland**
 Station ID: **1**
 Plot ID: **A**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|------------------------------------|-----------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Lythrum salicaria</i> | Loosestrife, Purple | 5 | FACW+ |
| | <i>Thelypteris thelypteroides</i> | Fern, Marsh | 5 | FACW+ |
| | <i>Parthenocissus quinquefolia</i> | Creeper, Virginia | 5 | FACU |
| | <i>Impatiens capensis</i> | Touch-Me-Not, Spotted | 2 | FACW |
| | <i>Juncus effusus</i> | Rush, Soft | 5 | FACW+ |
| | <i>Carex vulpinoidea</i> | Sedge, Fox | 5 | OBL |
| | <i>Carex comosa</i> | Sedge, Bearded | 5 | OBL |
| X | <i>Phalaris arundinacea</i> | Grass, Reed Canary | 90 | FACW+ |

% Species that are OBL, FACW, or FAC (except FAC-): **100**

Cowardin Classification: **PEM1J**

Remarks

Shrubs: None
 Trees: None

Hydrology

[X] Recorded Data (describe in remarks)
 [] Stream, Lake, or Tide Gage
 [] Aerial Photograph
 [X] Other (describe in remarks)

Primary Wetland Hydrology Indicators

[] Inundated
 [] Saturated in upper 12 inches
 [] Water marks
 [] Drift lines
 [] Sediment deposits
 [X] Drainage patterns in wetlands

Secondary Hydrology Indicators

[X] Oxidized root channels
 [] Water-stained leaves
 [] Local soil survey data
 [] FAC-Neutral test
 [] Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): **0**
 Depth to Free Water in Pit(in.): **>12**
 Depth to Saturated Soils(in.): **>12**

Remarks

Total Precipitation for June, 2007 (as of 6/22/07)(NOAA, Burlington): 2.16 inches
 Normal Precipitation for June: 2.23 inches
 Total Precipitation in five days preceding delineation: 0.73 inches

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|-----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 0-12 | A | GLE Y1 5/10Y | 2.5YR 5/8 | many | prominent | Clay Loam |
| 12-20 | B | 5Y 6/4 | 7.5YR 4/6 | many | prominent | Silt Loam |

Hydric Soils Indicators

[] Histosol
 [] Histic Epipedon
 [] Sulfidic Odor
 [] Probable Aquatic Moist Regime
 [] Reducing Conditions
 [X] Gleyed or Low-Chroma Colors
 [] Concretions
 [] High Organic % in Surface Layer in Sandy Soils
 [] Organic Streaking in Sandy Soils
 [X] Listed on Local Hydric Soils List
 [X] Listed on National Hydric Soils List
 [] Other (explain in remarks)

Unit Name: **Limerick Silt Loam**
 Drainage Class: **Poorly Drained**

Taxonomy: **Fluvaquentic Endoaquepts**
 [] Field Observations match map

Remarks

1987 Manual: Hydric
 NRCS Indicator: Hydric, VI
 Redoximorphic features begin at: Surface
 Soils disturbed due to road construction associated with existing powerline. Likely that A horizon has been removed.

Data Form

Routine Wetland Determination

Job Number: **06054**

Town/Village/City:

Wetland Data Point: **2007-9A**

Wetland Determination

Hydrophytic Vegetation Present

This Data Point is a Wetland

Hydric Soils Present

Wetland Hydrology Present

Remarks

Data Form
Routine Wetland Determination

Job Number: **06054**
 Town/Village/City:
 Wetland Data Point: **2007-9B**

Project/Site: **VT Transco EAL Access and RTE**
 Applicant/Owner: **VT Transco**
 Investigator: **ROC**

Date: **June 20, 2007**
 County: **Chittenden**
 State: **VT**

[True] Do normal circumstances exist on the site?
 [False] Is the site significantly disturbed (Atypical Situation)?
 [False] Is the area a potential problem area?

Community ID: **Upland**
 Station ID: **1**
 Plot ID: **B**

Vegetation

| Dominant | Species | Common Name / CofC | % Cover | Indicator |
|-------------------|------------------------------------|-----------------------|---------|-----------|
| Herbaceous | | | | |
| | <i>Phalaris arundinacea</i> | Grass, Reed Canary | 5 | FACW+ |
| X | <i>Parthenocissus quinquefolia</i> | Creeper, Virginia | 15 | FACU |
| | <i>Solidago rugosa</i> | Goldenrod, Rough-stem | 80 | FAC |
| Shrub | | | | |
| X | <i>Rhus typhina</i> | Sumac, staghorn | 10 | UPL |
| X | <i>Acer negundo</i> | Box-Elder | 10 | FAC+ |
| X | <i>Rhamnus cathartica</i> | Buckthorn, Common | 5 | UPL |
| Tree | | | | |
| X | <i>Acer negundo</i> | Box-Elder | 20 | FAC+ |

% Species that are OBL, FACW, or FAC (except FAC-): **60**

Cowardin Classification:

Remarks

Hydrology

[X] Recorded Data (describe in remarks)
 [] Stream, Lake, or Tide Gage
 [] Aerial Photograph
 [X] Other (describe in remarks)

Primary Wetland Hydrology Indicators

[] Inundated
 [] Saturated in upper 12 inches
 [] Water marks
 [] Drift lines
 [] Sediment deposits
 [] Drainage patterns in wetlands

Secondary Hydrology Indicators

[] Oxidized root channels
 [] Water-stained leaves
 [] Local soil survey data
 [] FAC-Neutral test
 [] Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): **0**
 Depth to Free Water in Pit(in.): **>4**
 Depth to Saturated Soils(in.): **>4**

Remarks

Total Precipitation for June, 2007 (as of 6/22/07)(NOAA, Burlington): 2.16 inches
 Normal Precipitation for June: 2.23 inches
 Total Precipitation in five days preceding delineation: 0.73 inches
 Refusal at 4 inches due to rock used to construct road.

Soils

| Depth (in.) | Hor. | Matrix Color | Mottle / 2nd Mottle | | | Texture, Structure, etc. |
|-------------|------|--------------|---------------------|-----------|----------|--------------------------|
| | | | Color | Abundance | Contrast | |
| 0-4 | A | 10YR 4/4 | | | | Loam cobbles |

Hydric Soils Indicators

[] Histosol
 [] Histic Epipedon
 [] Sulfidic Odor
 [] Probable Aquatic Moist Regime
 [] Reducing Conditions
 [] Gleyed or Low-Chroma Colors
 [] Concretions
 [] High Organic % in Surface Layer in Sandy Soils
 [] Organic Streaking in Sandy Soils
 [] Listed on Local Hydric Soils List
 [] Listed on National Hydric Soils List
 [] Other (explain in remarks)

Unit Name: **Limerick Silt Loam**
 Drainage Class: **Poorly Drained**

Taxonomy: **Fluvaquentic Endoaquepts**
 [] Field Observations match map

Remarks

1987 Manual: No
 NRCS Indicator: None
 Redoximorphic features begin at: None
 Soils disturbed due to road construction associated with existing powerline.

Wetland Determination

[True] Hydrophytic Vegetation Present
 [False] Hydric Soils Present
 [False] Wetland Hydrology Present
 [False] This Data Point is a Wetland

Remarks

Vermont Transco, LLC. (VT Transco)
East Avenue Loop Project – Off-Right-of-Way Access



Wetland 2007-1 and 2007-SC-1A



Wetland 2007-2

Vermont Transco, LLC. (VT Transco)
East Avenue Loop Project – Off-Right-of-Way Access



Wetland 2007-3



Wetland 2007-5

Vermont Transco, LLC. (VT Transco)
East Avenue Loop Project – Off-Right-of-Way Access



Wetland 2007-8 and 2007-SC-2



Wetland 2007-9 and 2007-SC-3

Photographs taken by Ryan O. Crehan of Pioneer Environmental Associates, LLC. on May 22, 2007 and June 20, 2007, respectively

Vermont Transco, LLC. (VT Transco)
East Avenue Loop Project – Off-Right-of-Way Access



Stream 2007-TB-1

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