



Wetland P2-J - View facing south



Wetland P2-J - Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE Package 2 City/County: Kingsbury / Washington Sampling Date: 10/31/2022

Applicant/Owner: TDI State: NY Sampling Point: Wet P2-J

Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 43.35609° N Long: -73.49658° W Datum: WGS 84

Soil Map Unit Name: Cv: Covington silty clay loam NWI classification: PSS1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag P2-J-6</u>
Remarks: (Explain alternative procedures here or in a separate report.) Palustrine scrub shrub wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: Wet P2-J

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Ulmus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>15</u> =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>130</u></td> <td>x 2 = <u>260</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>310</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.72</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>130</u>	x 2 = <u>260</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>180</u> (A)	<u>310</u> (B)	Prevalence Index = B/A = <u>1.72</u>	
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UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>180</u> (A)	<u>310</u> (B)																			
Prevalence Index = B/A = <u>1.72</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus sericea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Cornus amomum</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>75</u> =Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Carex lacustris</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Onoclea sensibilis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>90</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u> </u> =Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wet P2-J

[illegible]



Wetland P2-J - View facing east



Wetland P2-J - Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE Package 2 City/County: Kingsbury / Washington Sampling Date: 10/31/2022
 Applicant/Owner: TDI State: NY Sampling Point: Upl P2-J
 Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 5
 Subregion (LRR or MLRA): LRR R Lat: 43.35612° N Long: -73.49673° W Datum: WGS 84
 Soil Map Unit Name: Cv: Covington silty clay loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Hay field.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: Upl P2-J

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>345</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.45</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>345</u> (B)	Prevalence Index = B/A = <u>3.45</u>	
Total % Cover of:	Multiply by:																			
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Prevalence Index = B/A = <u>3.45</u>																				
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Setaria pumila</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Galium mollugo</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Phalaris arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Trifolium repens</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Lotus corniculatus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Trifolium pratense</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upl P2-J

[illegible]



Upland P2-J – View facing west/northwest



Upland P2-J - Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
Applicant/Owner: CHPE State: NY Sampling Point: GR-OO-Up
Investigator(s): KW, KS Section, Township, Range: Fort Edward
Landform (hillside, terrace, etc.): Toeslopes Local relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°20'37.32"N Long: 73°30'15.57"W Datum: _____
Soil Map Unit Name: Covington Silty Clay Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Railroad ROW	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ____ Surface Water (A1) ____ Water-Stained Leaves (B9) ____ High Water Table (A2) ____ Aquatic Fauna (B13) ____ Saturation (A3) ____ Marl Deposits (B15) ____ Water Marks (B1) ____ Hydrogen Sulfide Odor (C1) ____ Sediment Deposits (B2) ____ Oxidized Rhizospheres on Living Roots (C3) ____ Drift Deposits (B3) ____ Presence of Reduced Iron (C4) ____ Algal Mat or Crust (B4) ____ Recent Iron Reduction in Tilled Soils (C6) ____ Iron Deposits (B5) ____ Thin Muck Surface (C7) ____ Inundation Visible on Aerial Imagery (B7) ____ Other (Explain in Remarks) ____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> ____ Surface Soil Cracks (B6) ____ Drainage Patterns (B10) ____ Moss Trim Lines (B16) ____ Dry-Season Water Table (C2) ____ Crayfish Burrows (C8) ____ Saturation Visible on Aerial Imagery (C9) ____ Stunted or Stressed Plants (D1) ____ Geomorphic Position (D2) ____ Shallow Aquitard (D3) ____ Microtopographic Relief (D4) ____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: GR-OO-Up

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer negundo</u>	5	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Populus deltoides</u>	5	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
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Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. _____																				
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Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Phalaris arundinacea</u>	10	No	FACW	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Setaria faberi</u>	20	Yes	FACU																	
3. <u>Cirsium arvense</u>	5	No	FACU																	
4. <u>Solidago canadensis</u>	20	Yes	UPL																	
5. <u>Echinochloa crus-galli</u>	15	Yes	FAC																	
6. <u>Poa pratensis</u>	15	Yes	FACU																	
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	85	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. _____				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____																				
3. _____																				
4. _____																				
		=Total Cover		Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-00-Up

[illegible]



Upland G-R-OO- View facing South



Upland G-R-OO- View facing West

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-OO-Wet
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Toeslopes Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°20'37.32"N Long: 73°30'15.57"W Datum:
 Soil Map Unit Name: Covington Silty Clay Loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u></u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u></u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u>X</u>	No <u></u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u></u>	
Remarks: (Explain alternative procedures here or in a separate report.) Shallow emergent marsh			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u></u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u></u> High Water Table (A2) <u></u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u></u> Marl Deposits (B15) <u></u> Water Marks (B1) <u></u> Hydrogen Sulfide Odor (C1) <u></u> Sediment Deposits (B2) <u></u> Oxidized Rhizospheres on Living Roots (C3) <u></u> Drift Deposits (B3) <u></u> Presence of Reduced Iron (C4) <u></u> Algal Mat or Crust (B4) <u></u> Recent Iron Reduction in Tilled Soils (C6) <u></u> Iron Deposits (B5) <u></u> Thin Muck Surface (C7) <u></u> Inundation Visible on Aerial Imagery (B7) <u></u> Other (Explain in Remarks) <u></u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u></u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u></u> Moss Trim Lines (B16) <u></u> Dry-Season Water Table (C2) <u></u> Crayfish Burrows (C8) <u></u> Saturation Visible on Aerial Imagery (C9) <u></u> Stunted or Stressed Plants (D1) <u></u> Geomorphic Position (D2) <u></u> Shallow Aquitard (D3) <u></u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u>X</u> No <u></u> Depth (inches): <u>8</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u></u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-OO-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer negundo</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)																
2. <u>Ulmus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>15</u>		=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Salix discolor</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Alnus incana</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Rhus typhina</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>25</u>		=Total Cover		Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Typha latifolia</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Phalaris arundinacea</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Scirpus atrovirens</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Lythrum salicaria</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>75</u>		=Total Cover																		
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____		=Total Cover																		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-00-Wet

[illegible]



Wetland G-R-OO- View facing North



Wetland G-R-OO- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
Applicant/Owner: CHPE State: NY Sampling Point: GR-PP-Up
Investigator(s): KW, KS Section, Township, Range: Fort Edward
Landform (hillside, terrace, etc.): Footslopes Local relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°,20',14.05"N Long: 73°,30',33.26"W Datum: _____
Soil Map Unit Name: Kingsbury Silty Clay NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Railroad ROW	

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____		
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-PP-Up

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Acer saccharum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>15</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Rhus typhina</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Lonicera tatarica</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>_____</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
		<u>25</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Setaria faberi</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Solidago canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Cirsium arvense</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>45</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>Rubus allegheniensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <u>_____</u> No <u>X</u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>5</u>	=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-PP-Up

[illegible]



Upland G-R-PP- View facing North



Upland G-R-PP- View facing North

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-PP-Wet
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Footslopes Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 20', 14.05"N Long: 73° 30', 33.26"W Datum:
 Soil Map Unit Name: Kingsbury Silty Clay NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u></u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u></u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u>X</u> No <u></u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u></u>	
Remarks: (Explain alternative procedures here or in a separate report.) Wetland is essentially a drainage swale along the railroad toe with some adjacent wet open fields.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u></u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u></u> High Water Table (A2) <u></u> Aquatic Fauna (B13) <u></u> Saturation (A3) <u></u> Marl Deposits (B15) <u></u> Water Marks (B1) <u></u> Hydrogen Sulfide Odor (C1) <u></u> Sediment Deposits (B2) <u></u> Oxidized Rhizospheres on Living Roots (C3) <u></u> Drift Deposits (B3) <u></u> Presence of Reduced Iron (C4) <u></u> Algal Mat or Crust (B4) <u></u> Recent Iron Reduction in Tilled Soils (C6) <u></u> Iron Deposits (B5) <u></u> Thin Muck Surface (C7) <u></u> Inundation Visible on Aerial Imagery (B7) <u></u> Other (Explain in Remarks) <u></u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u></u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u></u> Moss Trim Lines (B16) <u></u> Dry-Season Water Table (C2) <u></u> Crayfish Burrows (C8) <u></u> Saturation Visible on Aerial Imagery (C9) <u></u> Stunted or Stressed Plants (D1) <u></u> Geomorphic Position (D2) <u></u> Shallow Aquitard (D3) <u></u> Microtopographic Relief (D4) <u></u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u></u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: GR-PP-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B)																
2. <u>Acer negundo</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Rhus typhina</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
2. <u>Cornus racemosa</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Lonicera tatarica</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>15</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Phalaris arundinacea</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Eutrochium maculatum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>75</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover																	
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-PP-Wet

[illegible]



Wetland G-R-PP- View facing West



Wetland G-R-PP- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-QQ-Up
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Dredge Spoils Local relief (concave, convex, none): None Slope %: 5
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°,19',53.39"N Long: 73°,30',49.31"W Datum:
 Soil Map Unit Name: Orthents and Psamments NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u></u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>X</u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u></u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u></u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Successional old field		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u></u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-QQ-Up

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Acer saccharum</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Rhus typhina</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
		<u>5</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Solidago canadensis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Setaria faberi</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Verbascum thapsus</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>60</u>	=Total Cover	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>Rubus allegheniensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>5</u>	=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-QQ-Up

[illegible]



Upland G-R-QQ- View facing West



Upland G-R-QQ- View facing North

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/18/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-QQ-Wet
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Dredge Spoils Local relief (concave, convex, none): None Slope %: 0
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43°,19',53.39"N Long: 73°,30',49.31"W Datum:
 Soil Map Unit Name: Orthents and Psamments NWI classification: PSS/PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u></u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u></u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u>X</u>	No <u></u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u></u>	
Remarks: (Explain alternative procedures here or in a separate report.) Shrub swamp/emergent marsh			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u></u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u></u> High Water Table (A2) <u></u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u></u> Marl Deposits (B15) <u></u> Water Marks (B1) <u></u> Hydrogen Sulfide Odor (C1) <u></u> Sediment Deposits (B2) <u></u> Oxidized Rhizospheres on Living Roots (C3) <u></u> Drift Deposits (B3) <u></u> Presence of Reduced Iron (C4) <u></u> Algal Mat or Crust (B4) <u></u> Recent Iron Reduction in Tilled Soils (C6) <u></u> Iron Deposits (B5) <u></u> Thin Muck Surface (C7) <u></u> Inundation Visible on Aerial Imagery (B7) <u></u> Other (Explain in Remarks) <u></u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u></u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u></u> Moss Trim Lines (B16) <u></u> Dry-Season Water Table (C2) <u></u> Crayfish Burrows (C8) <u></u> Saturation Visible on Aerial Imagery (C9) <u></u> Stunted or Stressed Plants (D1) <u></u> Geomorphic Position (D2) <u></u> Shallow Aquitard (D3) <u></u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u>X</u> No <u></u> Depth (inches): <u>6</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u></u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-QQ-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer negundo</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u></td> <td>(A) <u> </u> (B) <u> </u></td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u>	(A) <u> </u> (B) <u> </u>	Prevalence Index = B/A = <u> </u>	
Total % Cover of:	Multiply by:																			
OBL species <u> </u>	x 1 = <u> </u>																			
FACW species <u> </u>	x 2 = <u> </u>																			
FAC species <u> </u>	x 3 = <u> </u>																			
FACU species <u> </u>	x 4 = <u> </u>																			
UPL species <u> </u>	x 5 = <u> </u>																			
Column Totals: <u> </u>	(A) <u> </u> (B) <u> </u>																			
Prevalence Index = B/A = <u> </u>																				
2. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>10</u>	=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Acer negundo</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Cornus racemosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Lonicera tatarica</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Rhus typhina</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>40</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Typha latifolia</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u>Phalaris arundinacea</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Phragmites australis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
12. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>50</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u> </u>	=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-QQ-Wet

[illegible]



Wetland G-R-QQ- View facing Southwest



Wetland G-R-QQ- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/19/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-RR-Up
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Toeslopes and Foothills Local relief (concave, convex, none): Concave Slope %: 10
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 19' 09.31"N Long: 73° 31' 40.12"W Datum:
 Soil Map Unit Name: Covington SC Loam, Kingsbury Silty Clay, Orthents and Psamments NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u></u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>X</u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u></u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u></u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Successional old field		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>Surface Water (A1)</u> <u>Water-Stained Leaves (B9)</u> <u>High Water Table (A2)</u> <u>Aquatic Fauna (B13)</u> <u>Saturation (A3)</u> <u>Marl Deposits (B15)</u> <u>Water Marks (B1)</u> <u>Hydrogen Sulfide Odor (C1)</u> <u>Sediment Deposits (B2)</u> <u>Oxidized Rhizospheres on Living Roots (C3)</u> <u>Drift Deposits (B3)</u> <u>Presence of Reduced Iron (C4)</u> <u>Algal Mat or Crust (B4)</u> <u>Recent Iron Reduction in Tilled Soils (C6)</u> <u>Iron Deposits (B5)</u> <u>Thin Muck Surface (C7)</u> <u>Inundation Visible on Aerial Imagery (B7)</u> <u>Other (Explain in Remarks)</u> <u>Sparsely Vegetated Concave Surface (B8)</u>		<u>Secondary Indicators (minimum of two required)</u> <u>Surface Soil Cracks (B6)</u> <u>Drainage Patterns (B10)</u> <u>Moss Trim Lines (B16)</u> <u>Dry-Season Water Table (C2)</u> <u>Crayfish Burrows (C8)</u> <u>Saturation Visible on Aerial Imagery (C9)</u> <u>Stunted or Stressed Plants (D1)</u> <u>Geomorphic Position (D2)</u> <u>Shallow Aquitard (D3)</u> <u>Microtopographic Relief (D4)</u> <u>FAC-Neutral Test (D5)</u>
Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u></u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-RR-Up

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>5</u> =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
1. <u>Lonicera tatarica</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>5</u> =Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Setaria faberi</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Echinochloa crus-galli</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Poa pratensis</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
5. <u>Phalaris arundinacea</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>55</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Rubus allegheniensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u>5</u> =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-RR-Up

[illegible]



Upland G-R-RR- View facing West



Upland G-R-RR- Viewing facing Southwest

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/19/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-RR-Wet
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Toeslopes and Foothills Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 19' 09.31"N Long: 73° 31' 40.12"W Datum:
 Soil Map Unit Name: Covington SC Loam, Kingsbury Silty Clay, Orthents and Psamments NWI classification: PEM
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u></u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u></u> If yes, optional Wetland Site ID: <u></u>
Hydric Soil Present?	Yes <u>X</u> No <u></u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u></u>	
Remarks: (Explain alternative procedures here or in a separate report.) Shallow emergent Marsh		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u></u> Depth (inches): <u>2</u> Water Table Present? Yes <u></u> No <u>X</u> Depth (inches): <u></u> Saturation Present? Yes <u>X</u> No <u></u> Depth (inches): <u>8</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u></u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-RR-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer negundo</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5%</u> (A/B)																
2. <u>Ulmus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus racemosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Viburnum lentago</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Lonicera tatarica</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>20</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Lythrum salicaria</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Phalaris arundinacea</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Scirpus cyperinus</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5. <u>Epilobium coloratum</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
6. <u>Phragmites australis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>95</u>	=Total Cover	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover																	
Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-RR-Wet

[illegible]



Wetland G-R-RR- View facing West



Wetland G-R-RR- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE City/County: Fort Ann / Washington County Sampling Date: 05/16/22
Applicant/Owner: TDI State: NY Sampling Point: WET G-R-RR-D
Investigator(s): C. Scrivner and N. Frazer Section, Township, Range: _____
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 43.30667 Long: -73.54274 Datum: WGS 84
Soil Map Unit Name: Covington silty clay loam (Cv) NWI classification: PEM1
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag G-R-RR-D</u>
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Remarks: (Explain alternative procedures here or in a separate report.)
Shallow emergent marsh.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WET G-R-RR-D

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>180</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.80</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>180</u> (B)	Prevalence Index = B/A = <u>1.80</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>80</u>	x 2 = <u>160</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>180</u> (B)																			
Prevalence Index = B/A = <u>1.80</u>																				
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Phalaris arundinacea</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Lythrum salicaria</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Carex vulpinoidea</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Galium palustre</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
100 = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WET G-R-RR-D

[illegible]



Wetland G-R-RR-D - View facing east/northeast



Wetland G-R-RR-D - Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE City/County: Fort Ann / Washington County Sampling Date: 05/16/22

Applicant/Owner: TDI State: NY Sampling Point: UPL G-R-RR-D

Investigator(s): C. Scrivner and N. Frazer Section, Township, Range: _____

Landform (hillside, terrace, etc.): Slight depression Local relief (concave, convex, none): concave Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 43.30662 Long: -73.54291 Datum: WGS 84

Soil Map Unit Name: Kingsbury silty clay, 0 to 2 percent slopes (KbA) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
 Successional old field.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) </div> <div style="width: 50%;"> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) </div> </div>	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL G-R-RR-D

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>310</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.65</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>85</u> (A)	<u>310</u> (B)	Prevalence Index = B/A = <u>3.65</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>35</u>	x 3 = <u>105</u>																			
FACU species <u>45</u>	x 4 = <u>180</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>85</u> (A)	<u>310</u> (B)																			
Prevalence Index = B/A = <u>3.65</u>																				
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Galium boreale</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Taraxacum officinale</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Barbarea vulgaris</u>	<u>15</u>	<u>No</u>																		
4. <u>Setaria faberi</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Arctium minus</u>	<u>8</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Artemisia vulgaris</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
7. <u>Phleum pratense</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 100 = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL G-R-RR-D

[illegible]



Upland G-R-RR-D - View facing west



Upland G-R-RR-D - Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE City/County: Fort Ann / Washington County Sampling Date: 05/16/22

Applicant/Owner: TDI State: NY Sampling Point: WET-CP2-A-1

Investigator(s): C.Scrivner and N. Frazer Section, Township, Range: _____

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2

Subregion (LRR or MLRA): LRR R Lat: 43.30507 Long: -73.54454 Datum: WGS 84

Soil Map Unit Name: Kingsbury silty clay, 0 to 2 percent slopes (KbA) NWI classification: PEM1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag CP2-A-1</u>
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Remarks: (Explain alternative procedures here or in a separate report.)
 Shallow emergent marsh with scattered shrubs.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

 Sampling Point: WET CP2-A-1

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Populus deltoides</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. <u>Salix nigra</u>	<u>3</u>	<u>Yes</u>	<u>OBL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>8</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>26</u></td> <td>x 1 = <u>26</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>136</u> (A)</td> <td><u>276</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.03</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>26</u>	x 1 = <u>26</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>136</u> (A)	<u>276</u> (B)	Prevalence Index = B/A = <u>2.03</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>26</u>	x 1 = <u>26</u>																			
FACW species <u>80</u>	x 2 = <u>160</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>136</u> (A)	<u>276</u> (B)																			
Prevalence Index = B/A = <u>2.03</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Populus deltoides</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Cornus amomum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Salix nigra</u>	<u>3</u>	<u>No</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>28</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Phragmites australis</u>	<u>65</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Lythrum salicaria</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
3. <u>Equisetum arvense</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>100</u>	=Total Cover	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WET CP2-A-1

[illegible]



Wetland CP2-A-1- View facing southwest



Wetland CP2-A-1- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: CHPE City/County: Fort Ann / Washington County Sampling Date: 05/16/22
Applicant/Owner: TDI State: NY Sampling Point: UPL CP2-A-1
Investigator(s): C. Scrivner and N. Frazer Section, Township, Range: _____
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 43.30515 Long: -73.54479 Datum: WGS 84
Soil Map Unit Name: Kingsbury silty clay, 0 to 2 percent slopes (KbA) NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.)
Successional old field.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ____ Surface Water (A1) ____ Water-Stained Leaves (B9) ____ High Water Table (A2) ____ Aquatic Fauna (B13) ____ Saturation (A3) ____ Marl Deposits (B15) ____ Water Marks (B1) ____ Hydrogen Sulfide Odor (C1) ____ Sediment Deposits (B2) ____ Oxidized Rhizospheres on Living Roots (C3) ____ Drift Deposits (B3) ____ Presence of Reduced Iron (C4) ____ Algal Mat or Crust (B4) ____ Recent Iron Reduction in Tilled Soils (C6) ____ Iron Deposits (B5) ____ Thin Muck Surface (C7) ____ Inundation Visible on Aerial Imagery (B7) ____ Other (Explain in Remarks) ____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ____ Surface Soil Cracks (B6) ____ Drainage Patterns (B10) ____ Moss Trim Lines (B16) ____ Dry-Season Water Table (C2) ____ Crayfish Burrows (C8) ____ Saturation Visible on Aerial Imagery (C9) ____ Stunted or Stressed Plants (D1) ____ Geomorphic Position (D2) ____ Shallow Aquitard (D3) ____ Microtopographic Relief (D4) ____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL CP2-A-1

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>113</u> (A)</td> <td><u>461</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.08</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>113</u> (A)	<u>461</u> (B)	Prevalence Index = B/A = <u>4.08</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>3</u>	x 2 = <u>6</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>95</u>	x 4 = <u>380</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>113</u> (A)	<u>461</u> (B)																			
Prevalence Index = B/A = <u>4.08</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus amomum</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Solidago canadensis</u>	<u>65</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Lotus corniculatus</u>	<u>15</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Artemisia vulgaris</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Securigera varia</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
5. <u>Pastinaca sativa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
6. <u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>30'</u>)																				
1. <u>Vitis aestivalis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ = Total Cover																				

Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
3 - Prevalence Index is ≤3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL CP2-A-1

[illegible]



Upland CP2-A-1- View facing west/southwest



Upland CP2-A-1- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/22/21
 Applicant/Owner: CHPE State: NY Sampling Point: GR-SS-Up
 Investigator(s): KW, KS Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope %: 10
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 17' 48.49"N Long: 73° 33' 08.39"W Datum: _____
 Soil Map Unit Name: Catden Muck NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Railroad ROW		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: GR-SS-Up

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28.6%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>5</u>	<u>=Total Cover</u>		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Rhus typhina</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Cornus racemosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Lonicera tatarica</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>30</u>	<u>=Total Cover</u>																		
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Setaria faberi</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Solidago canadensis</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Echinochloa crus-galli</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>45</u>	<u>=Total Cover</u>																		
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>Rubus allegheniensis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	<u>5</u>	<u>=Total Cover</u>																		

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-SS-Up

[illegible]



Upland G-R-SS- View facing Northeast



Upland G-R-SS- Views facing Northeast

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE - CP Rail - Comstock to Fort Edward Section City/County: Washington Sampling Date: 11/22/21
Applicant/Owner: CHPE State: NY Sampling Point: GR-SS-Wet
Investigator(s): KW, KS Section, Township, Range: Fort Edward
Landform (hillside, terrace, etc.): Depressions Local relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 17' 48.49"N Long: 73° 33' 08.39"W Datum: _____
Soil Map Unit Name: Catden Muck NWI classification: PEM/PSS
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Shrub swamp/emergent marsh	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>X</u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) <u>X</u> Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GR-SS-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer negundo</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u></td> <td>(A) <u> </u> (B) <u> </u></td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u> </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u>	(A) <u> </u> (B) <u> </u>	Prevalence Index = B/A = <u> </u>	
Total % Cover of:	Multiply by:																			
OBL species <u> </u>	x 1 = <u> </u>																			
FACW species <u> </u>	x 2 = <u> </u>																			
FAC species <u> </u>	x 3 = <u> </u>																			
FACU species <u> </u>	x 4 = <u> </u>																			
UPL species <u> </u>	x 5 = <u> </u>																			
Column Totals: <u> </u>	(A) <u> </u> (B) <u> </u>																			
Prevalence Index = B/A = <u> </u>																				
2. <u>Ulmus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>20</u> =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Alnus incana</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Viburnum lentago</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Lonicera tatarica</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>30</u> =Total Cover																				
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Lythrum salicaria</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Onoclea sensibilis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
11. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
12. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>70</u> =Total Cover																				
Woody Vine Stratum (Plot size: <u>15'</u>)																				
1. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
<u>10</u> =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GR-SS-Wet

[illegible]



Wetland G-R-SS- View facing Northwest



Wetland G-R-SS- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE- Package 2- Tow Path Lane City/County: Fort Edward/ Washington Sampling Date: 2/21/2023
 Applicant/Owner: CHPE State: NY Sampling Point: GP2-EE-Wet
 Investigator(s): K. Weiskotten, K. Schumacher Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Lake Plains Local relief (concave, convex, none): Concave Slope (%):
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 17' 33.7" Long: -73° 33' 34.7" Datum:
 Soil Map Unit Name: Water NWI classification: PUB

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: (Explain alternative procedures here or in a separate report.) Open water canal with slow moving ponded water that drained into Bond Creek.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GP2-EE-Wet

Tree Stratum (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	5	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>72.7%</u> (A/B)																
2. <u>Ulmus americana</u>	5	Yes	FACW																	
3. <u>Acer saccharum</u>	5	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	15	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: <u>15'</u>)																				
1. <u>Cornus racemosa</u>	10	Yes	FAC																	
2. <u>Lonicera tatarica</u>	10	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	20	=Total Cover		Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
Herb Stratum (Plot size: <u>5'</u>)																				
1. <u>Typha angustifolia</u>	30	Yes	OBL																	
2. <u>Phalaris arundinacea</u>	15	Yes	FACW																	
3. <u>Lythrum salicaria</u>	15	Yes	OBL																	
4. <u>Carex stricta</u>	15	Yes	OBL																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	75	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Vitis riparia</u>	5	Yes	FAC																	
2. <u>Toxicodendron radicans</u>	5	Yes	FAC																	
3. _____																				
4. _____																				
	10	=Total Cover																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP2-EE-Wet

[illegible]



Wetland GP2-EE-Wet



Wetland GP2-EE-Wet- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE- Package 2- Tow Path Lane City/County: Fort Edward/ Kingsbury Sampling Date: 2/21/2023
 Applicant/Owner: CHPE State: NY Sampling Point: GP2-EE-Up
 Investigator(s): K. Weiskotten, K. Schumacher Section, Township, Range: Fort Edward
 Landform (hillside, terrace, etc.): Lake Plains Local relief (concave, convex, none): Concave Slope (%):
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43° 17' 33.7" Long: -73° 33' 34.7 Datum:
 Soil Map Unit Name: Kingsbury silty clay NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) A soil test pit was not able to be dug due to the restrictive layer of stone dust and fill along the walking trail.			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u> </u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: GP2-EE-Up

<u>Tree Stratum</u> (Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus americana</u>	10	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30.0%</u> (A/B)																
2. <u>Ulmus americana</u>	5	Yes	FACW																	
3. <u>Acer saccharum</u>	5	Yes	FACU																	
4. <u>Prunus serotina</u>	5	Yes	FACU																	
5. <u>Robinia pseudoacacia</u>	5	Yes	FACU																	
6. _____																				
7. _____																				
	30	=Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u>)																				
1. <u>Lonicera tatarica</u>	10	Yes	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Poa pratensis</u>	20	Yes	FACU																	
2. <u>Digitaria sanguinalis</u>	15	Yes	FACU																	
3. <u>Trifolium pratense</u>	5	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	40	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>15'</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Vitis riparia</u>	5	Yes	FAC																	
2. <u>Toxicodendron radicans</u>	5	Yes	FAC																	
3. _____																				
4. _____																				
	10	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: GP2-EE-Up

[illegible]



Upland GP2-EE-Up



Upland GP2-EE-Up- Soils

Segment 3 - Package 2

SITE PHOTOGRAPHS

Champlain Hudson Power Express

ATTACHMENT 2
NWI & NYSDEC WETLAND & STREAM MAPS

Author: Cole Scrivner Date Saved: 4/6/2022

Legend

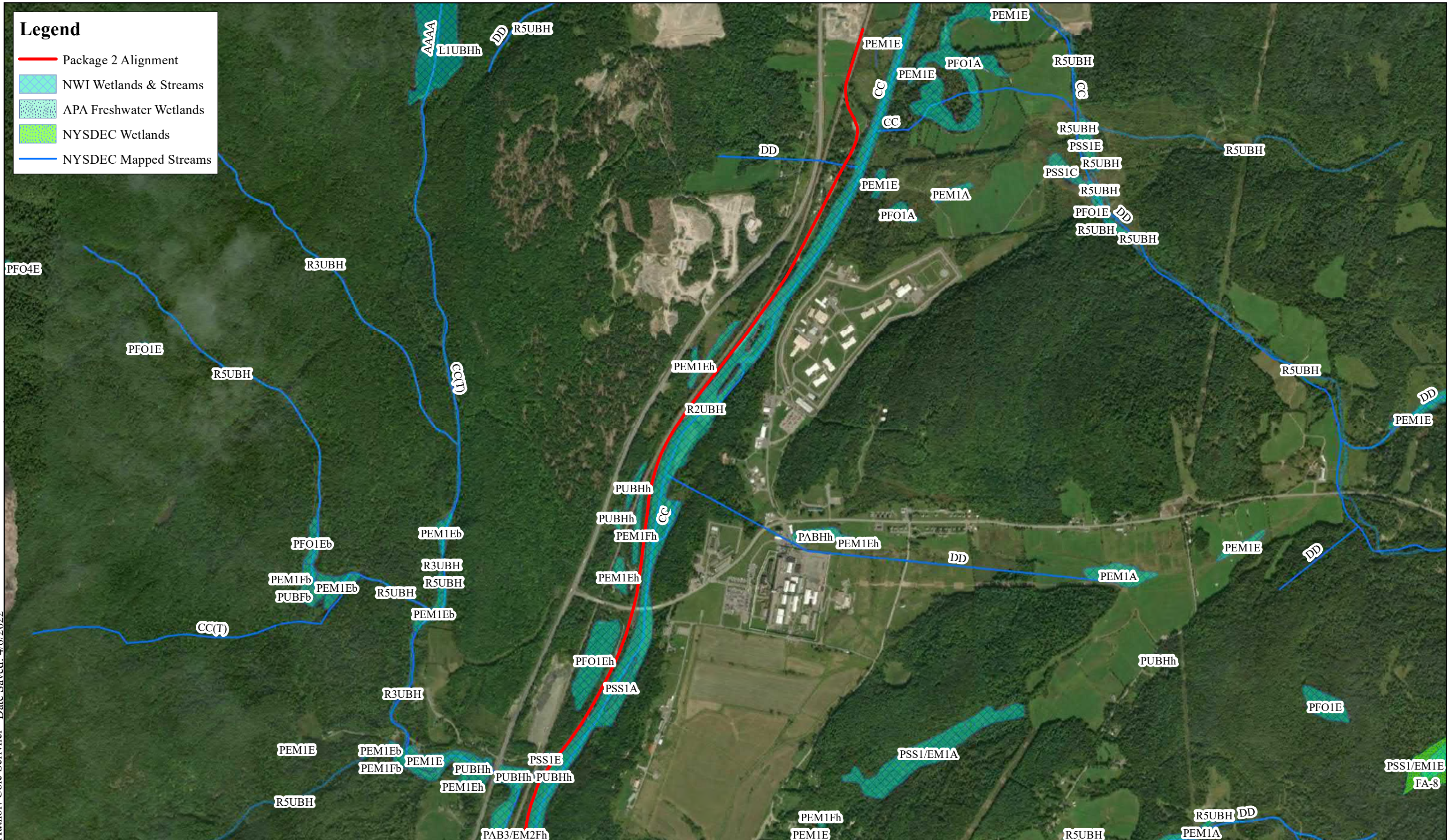
Package 2 Alignment

NWI Wetlands & Streams

APA Freshwater Wetlands

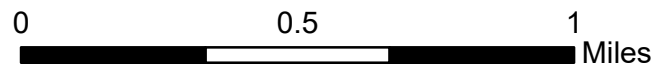
NYSDEC Wetlands

NYSDEC Mapped Streams



N

Page 1 of 6



***Champlain Hudson Power Express
Package 2 Wetland & Stream Map
(NWI & NYSDEC)***

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Wetland layers obtained from USFWS NWI, NYS Clearing House (NYSDEC), and the Adirondack Park Agency.

Author: Cole Scrivner Date Saved: 4/6/2022

Legend

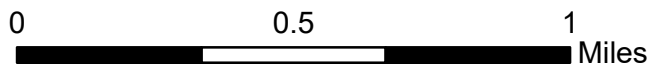
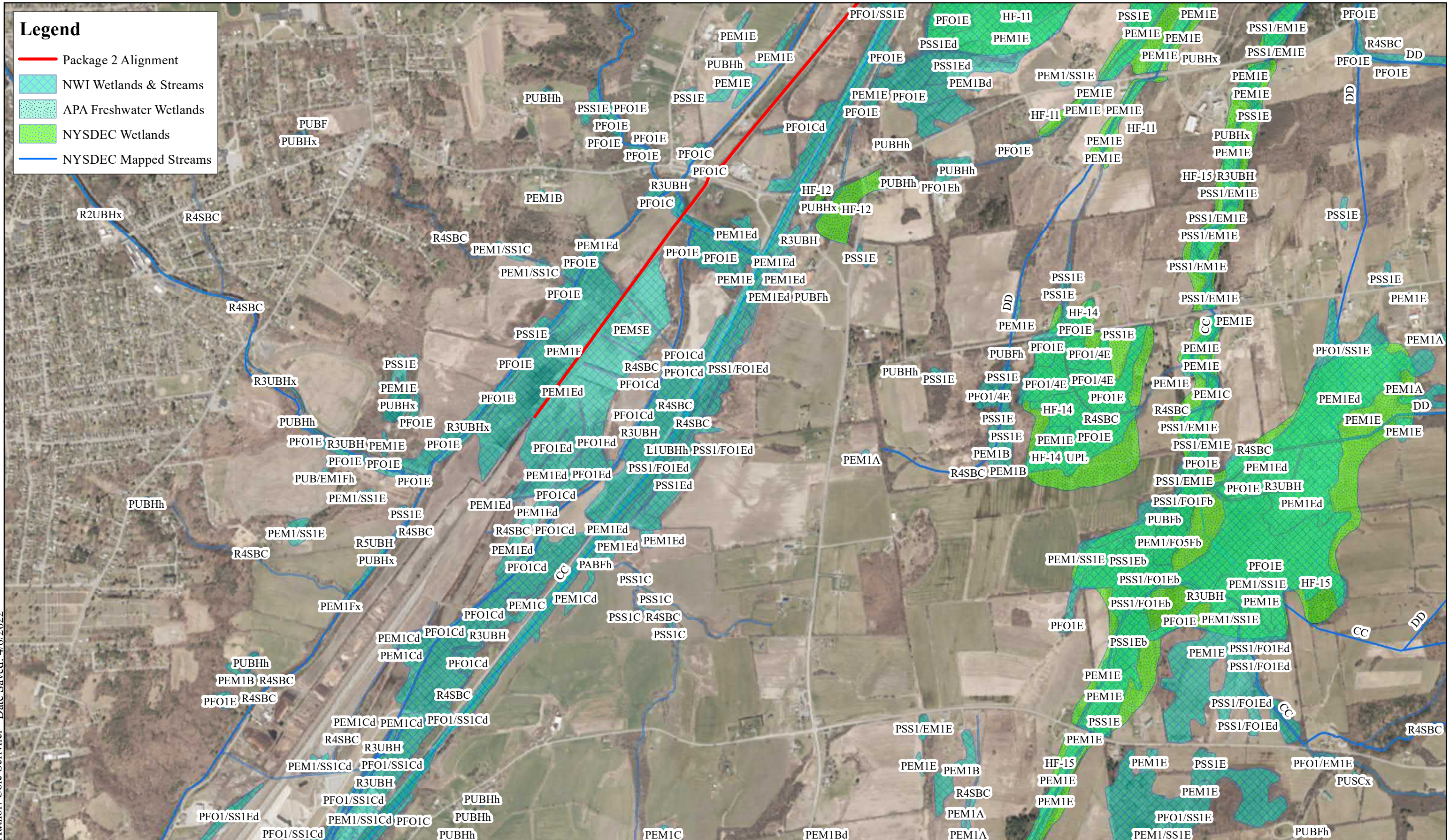
Package 2 Alignment

NWI Wetlands & Streams

APA Freshwater Wetlands

NYSDEC Wetlands

NYSDEC Mapped Streams



*Champlain Hudson Power Express
Package 2 Wetland & Stream Map
(NWI & NYSDEC)*

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Wetland layers obtained from USFWS NWI, NYS Clearing House (NYSDEC), and the Adirondack Park Agency.

ATTACHMENT 3 NRCS SOIL MAPS

Author: Cole Scrivner Date Saved: 2/7/2022

Legend

Package 2 Alignment

NRCS Soils

Cv

FL

HLE; HNC

HWE

HvC

KbA; KbB

OP

Ps

SB

VeB; VeC; VeD

W

N

Page 1 of 6

0

0.5

1

Miles

Champlain Hudson Power Express

Package 2 NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 2/7/2022

Package 2 Alignment

NRCS Soils

FCC; FCF; FaB

FL

Fr

HLE; HNC

KbA; KbB

Lm

OKE; OaB; OaC

OP

SB

Sa

VeB; VeC; VeD

W

N
Page 2 of 6

0 0.5 1 Miles

Champlain Hudson Power Express
Package 2 NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 2/7/2022

Package 2 Alignment

OP

PaB

SB

VeB; VeC; VeD

W

NRCS Soils

CIA; CIB

Cs

HcA; HcB; HcC; HcD

KbA; KbB

N
Page 3 of 6

*Champlain Hudson Power Express
Package 2 NRCS Soil Map*

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 2/7/2022

Legend

Package 2 Alignment

NRCS Soils

BeB

CIA; CIB

Cv

FCC; FCF; FaB

KbA; KbB


NAC

OKE; OaB; OaC


OP

VeB; VeC; VeD

W



N



Page 4 of 6

0

0.5

1

Miles

Champlain Hudson Power Express

Package 2 NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 2/7/2022

Legend

Package 2 Alignment

NRCS Soils

BeB

Cv

KbA; KbB

OKE; OaB; OaC

OP

Pm

VeB; VeC; VeD

W

N

Page 5 of 6

*Champlain Hudson Power Express
Package 2 NRCS Soil Map*

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 2/7/2022

Legend

Package 2 Alignment

NRCS Soils

Ca - Carlisle & Catden muck

CIA; CIB

Cv

FCC; FCF; FaB

KbA; KbB

VeB; VeC; VeD

W

Wa

N

Page 6 of 6

*Champlain Hudson Power Express
Package 2 NRCS Soil Map*

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Washington County, New York

CIA—Claverack loamy fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9xyy

Elevation: 600 to 1,800 feet

Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Claverack and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Claverack**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand
H2 - 8 to 33 inches: loamy fine sand
H3 - 33 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components**Cosad**

Percent of map unit: 8 percent
Hydric soil rating: No

Hudson

Percent of map unit: 4 percent

Hydric soil rating: No

Oakville

Percent of map unit: 4 percent

Hydric soil rating: No

Belgrade

Percent of map unit: 4 percent

Hydric soil rating: No

Cs—Cosad fine sandy loam**Map Unit Setting**

National map unit symbol: 9xz0

Elevation: 200 to 800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Cosad and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cosad**Setting**

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Sandy glaciofluvial or deltaic deposits over clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 30 inches: loamy fine sand

H3 - 30 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 20 to 34 inches to strongly contrasting textural stratification

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components**Claverack**

Percent of map unit: 8 percent
Hydric soil rating: No

Rhinebeck

Percent of map unit: 5 percent
Hydric soil rating: No

Madalin

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Oakville

Percent of map unit: 2 percent
Hydric soil rating: No

Wallington

Percent of map unit: 1 percent
Hydric soil rating: No

Cv—Covington silty clay loam**Map Unit Setting**

National map unit symbol: 9xz1
Elevation: 50 to 1,000 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Covington and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Covington**Setting**

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Calcareous clayey glaciolacustrine deposits or
glaciomarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam

H2 - 6 to 13 inches: silty clay

H3 - 13 to 27 inches: clay

H4 - 27 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 6.2
inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: D

Ecological site: F142XB007VT - Wet Clayplain Depression

Hydric soil rating: Yes

Minor Components

Kingsbury

Percent of map unit: 8 percent

Hydric soil rating: No

Madalin

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Rhinebeck

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

FCC—Farmington-Rock outcrop association, nearly level through moderately steep

Map Unit Setting

National map unit symbol: 9xz2

Elevation: 100 to 900 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 50 percent

Rock outcrop: 20 percent

Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Till plains, ridges, benches

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 18 inches: loam

H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F142XB010NY - Shallow Rich Till Upland

Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydric soil rating: Unranked

Minor Components

Amenia

Percent of map unit: 8 percent

Hydric soil rating: No

Pittsfield

Percent of map unit: 8 percent

Hydric soil rating: No

Vergennes

Percent of map unit: 7 percent

Hydric soil rating: No

Kingsbury

Percent of map unit: 7 percent

Hydric soil rating: No

Fr—Fredon silt loam

Map Unit Setting

National map unit symbol: 9xz6

Elevation: 250 to 1,200 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Fredon, poorly drained, and similar soils: 50 percent

Fredon, somewhat poorly drained, and similar soils: 30 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredon, Poorly Drained

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 22 inches: gravelly fine sandy loam
H3 - 22 to 60 inches: stratified very gravelly sand to gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F144AY029NY - Semi-Rich Wet Outwash
Hydric soil rating: Yes

Description of Fredon, Somewhat Poorly Drained**Setting**

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 22 inches: gravelly fine sandy loam
H3 - 22 to 60 inches: stratified very gravelly sand to gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F144AY029NY - Semi-Rich Wet Outwash
Hydric soil rating: No

Minor Components**Herkimer**

Percent of map unit: 5 percent
Hydric soil rating: No

Halsey

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Hoosic

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

Otisville

Percent of map unit: 3 percent
Hydric soil rating: No

HcB—Hartland very fine sandy loam, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 9xzh
Elevation: 50 to 500 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hartland and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hartland**Setting**

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Silty eolian or glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: very fine sandy loam

H2 - 10 to 26 inches: very fine sandy loam

H3 - 26 to 75 inches: very fine sandy loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Ecological site: F144AY017NH - Well Drained Lake Plain

Hydric soil rating: No

Minor Components

Belgrade

Percent of map unit: 6 percent

Hydric soil rating: No

Wallington

Percent of map unit: 5 percent

Hydric soil rating: No

Oakville

Percent of map unit: 5 percent

Hydric soil rating: No

Hamlin

Percent of map unit: 4 percent

Hydric soil rating: No

HLE—Hollis-Charlton association, moderately steep and steep

Map Unit Setting

National map unit symbol: 9xz7

Elevation: 100 to 2,570 feet

Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 60 percent
Charlton and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis**Setting**

Landform: Ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: A thin mantle of loamy till derived mainly from schist, granite, and gneiss

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 19 inches: fine sandy loam
H3 - 19 to 23 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Charlton**Setting**

Landform: Till plains, ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Acid loamy till derived mainly from schist, gneiss, or granite

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

H1 - 1 to 3 inches: sandy loam

H2 - 3 to 29 inches: gravelly sandy loam

H3 - 29 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 15 to 25 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 40 to 72 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: F142XB008VT - Steep Acidic Till Upland

Hydric soil rating: No

Minor Components**Pittsfield**

Percent of map unit: 5 percent

Hydric soil rating: No

Rock outcrop

Percent of map unit: 3 percent

Hydric soil rating: Unranked

Unnamed soils

Percent of map unit: 2 percent

HNC—Hollis-Rock outcrop association, gently sloping and sloping**Map Unit Setting**

National map unit symbol: 9xz8

Elevation: 100 to 2,150 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 70 percent

Rock outcrop: 15 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis**Setting**

Landform: Ridges, hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: A thin mantle of loamy till derived mainly from schist, granite, and gneiss

Typical profile

H1 - 0 to 4 inches: loam

H2 - 4 to 19 inches: fine sandy loam

H3 - 19 to 23 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 0.0 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Hydric soil rating: No

Description of Rock Outcrop**Properties and qualities**

Slope: 3 to 8 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Minor Components**Charlton**

Percent of map unit: 6 percent

Hydric soil rating: No

Sun

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Carlisle

Percent of map unit: 4 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

HvC—Hudson silt loam, 6 to 12 percent slopes**Map Unit Setting**

National map unit symbol: 9xzs

Elevation: 300 to 1,800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hudson and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hudson**Setting**

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 12 inches: silt loam

H3 - 12 to 26 inches: silty clay

H4 - 26 to 60 inches: stratified silty clay

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Ecological site: F144AY018NY - Moist Lake Plain

Hydric soil rating: No

Minor Components**Rhinebeck**

Percent of map unit: 5 percent

Hydric soil rating: No

Vergennes

Percent of map unit: 5 percent

Hydric soil rating: No

Belgrade

Percent of map unit: 5 percent

Hydric soil rating: No

Nassau

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 4 percent

Eroded soils

Percent of map unit: 2 percent

Hydric soil rating: No

HWE—Hudson and Vergennes soils, steep and very steep**Map Unit Setting**

National map unit symbol: 9xzc

Elevation: 90 to 1,800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Hudson and similar soils: 50 percent

Vergennes and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hudson**Setting**

Landform: Lake plains

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 12 inches: silt loam
H3 - 12 to 26 inches: silty clay
H4 - 26 to 60 inches: stratified silty clay

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C/D
Hydric soil rating: No

Description of Vergennes**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 13 inches: silty clay
H3 - 13 to 25 inches: clay
H4 - 25 to 60 inches: clay

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 13 to 24 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components**Fluvaquents**

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Nassau

Percent of map unit: 3 percent
Hydric soil rating: No

Severely eroded soils

Percent of map unit: 2 percent
Hydric soil rating: No

KbA—Kingsbury silty clay, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 9xzv
Elevation: 80 to 600 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Kingsbury and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kingsbury**Setting**

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous, clayey glaciomarine deposits or glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silty clay

H2 - 8 to 28 inches: clay

H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1
inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: F142XB006NY - Moist Clayplain

Hydric soil rating: No

Minor Components**Vergennes**

Percent of map unit: 5 percent

Hydric soil rating: No

Covington

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Farmington

Percent of map unit: 4 percent

Hydric soil rating: No

Hollis

Percent of map unit: 3 percent

Hydric soil rating: No

Charlton

Percent of map unit: 3 percent

Hydric soil rating: No

Lm—Limerick silt loam**Map Unit Setting**

National map unit symbol: 9xzx

Elevation: 50 to 500 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Limerick and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Limerick

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Alluvium that is dominantly silt and very fine sand

Typical profile

H1 - 0 to 3 inches: silt loam

H2 - 3 to 26 inches: silt loam

H3 - 26 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: FrequentNone

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very high (about 13.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Ecological site: F144AY015NY - Wet Silty Low Floodplain

Hydric soil rating: Yes

Minor Components

Hamlin

Percent of map unit: 5 percent

Hydric soil rating: No

Teel

Percent of map unit: 5 percent

Hydric soil rating: No

Saco

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Unnamed soils

Percent of map unit: 5 percent

OKE—Oakville loamy fine sand, moderately steep and steep**Map Unit Setting**

National map unit symbol: 9y02

Elevation: 600 to 1,200 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Oakville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oakville**Setting**

Landform: Terraces, outwash plains, deltas

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy eolian, beach ridge, or glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: loamy fine sand

H2 - 9 to 24 inches: loamy fine sand

H3 - 24 to 60 inches: fine sand

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hoosic

Percent of map unit: 6 percent
Hydric soil rating: No

Otisville

Percent of map unit: 6 percent
Hydric soil rating: No

Hudson

Percent of map unit: 5 percent
Hydric soil rating: No

Vergennes

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

OP—Orthents and Psamments

Map Unit Setting

National map unit symbol: 9y03
Elevation: 80 to 330 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Orthents and similar soils: 50 percent
Psamments and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orthents

Setting

Parent material: Dredge spoils

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 60 inches: channery loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Psamments**Setting**

Parent material: Dredge spoils

Typical profile

H1 - 0 to 10 inches: fine sand
H2 - 10 to 60 inches: coarse sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components**Herkimer**

Percent of map unit: 2 percent
Hydric soil rating: No

Covington

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Fredon

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Claverack

Percent of map unit: 2 percent

Hydric soil rating: No

Rhinebeck

Percent of map unit: 1 percent

Hydric soil rating: No

Hoosic

Percent of map unit: 1 percent

Hydric soil rating: No

PaB—Palatine shaly silt loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 9y0b

Elevation: 600 to 1,800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Palatine and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palatine**Setting**

Landform: Till plains, ridges, benches

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Channery loamy till dominated by calcareous dark shale

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 38 inches: very channery silt loam

H3 - 38 to 42 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components**Amenia**

Percent of map unit: 7 percent
Hydric soil rating: No

Farmington

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 4 percent

Ps—Pits, quarry**Map Unit Setting**

National map unit symbol: 1qdsv
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Quarries: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Sa—Saco silt loam**Map Unit Setting**

National map unit symbol: 9y0r
Elevation: 80 to 950 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Saco and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saco

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Silty alluvium derived mainly from crystalline rock, shale, and sandstone

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 30 inches: silt loam

H3 - 30 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: FrequentNone

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components

Limerick

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Teel

Percent of map unit: 5 percent

Hydric soil rating: No

Wallington

Percent of map unit: 4 percent

Hydric soil rating: No

Belgrade

Percent of map unit: 4 percent

Hydric soil rating: No

Fluvaquents

Percent of map unit: 2 percent

Landform: Flood plains
Hydric soil rating: Yes

SB—Saprists, Aquepts, and Aquepts

Map Unit Setting

National map unit symbol: 9y0n
Elevation: 10 to 2,400 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Saprists and similar soils: 30 percent
Aquepts and similar soils: 25 percent
Aquepts and similar soils: 20 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saprists

Setting

Landform: Marshes, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

H1 - 0 to 70 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.20 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Aquepts**Setting**

Landform: Depressions

Landform position (two-dimensional): Toeslope

Down-slope shape: Concave

Across-slope shape: Concave

Typical profile

H1 - 0 to 9 inches: mucky silty clay loam

H2 - 9 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.06 to 1.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Description of Aquents**Setting**

Landform: Depressions

Landform position (two-dimensional): Toeslope

Down-slope shape: Concave

Across-slope shape: Concave

Typical profile

H1 - 0 to 12 inches: gravelly fine sandy loam

H2 - 12 to 70 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.06 to 1.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components**Carlisle**

Percent of map unit: 5 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

Madalin

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Sun

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Fluvaquents

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Halsey

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

VeB—Vergennes silty clay loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 2rvsk

Elevation: 100 to 510 feet

Mean annual precipitation: 31 to 59 inches

Mean annual air temperature: 39 to 48 degrees F

Frost-free period: 120 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Vergennes and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes

Setting

Landform: Lake terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous clayey estuarine deposits derived from limestone and/or calcareous clayey glaciolacustrine deposits derived from limestone

Typical profile

Ap - 0 to 8 inches: silty clay loam

B/E - 8 to 10 inches: clay

Bt - 10 to 22 inches: clay

BC - 22 to 29 inches: silty clay

C1 - 29 to 37 inches: silty clay

C2 - 37 to 45 inches: silty clay

C3 - 45 to 79 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Cayuga

Percent of map unit: 5 percent

Landform: Drumlinoid ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Kingsbury

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Wilpoint

Percent of map unit: 3 percent
Landform: Lake terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Farmington

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

VeC—Vergennes silty clay loam, 6 to 12 percent slopes**Map Unit Setting**

National map unit symbol: 9y0y
Elevation: 50 to 1,000 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Vergennes and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex

Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam

H2 - 6 to 13 inches: silty clay

H3 - 13 to 25 inches: clay

H4 - 25 to 60 inches: clay

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components**Kingsbury**

Percent of map unit: 5 percent

Hydric soil rating: No

Farmington

Percent of map unit: 5 percent

Hydric soil rating: No

Hollis

Percent of map unit: 5 percent

Hydric soil rating: No

Hudson

Percent of map unit: 3 percent

Hydric soil rating: No

Eroded soils

Percent of map unit: 2 percent

Hydric soil rating: No

VeD—Vergennes silty clay loam, 12 to 20 percent slopes**Map Unit Setting**

National map unit symbol: 9y0z

Elevation: 50 to 1,000 feet

Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Vergennes and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 13 inches: silty clay
H3 - 13 to 25 inches: clay
H4 - 25 to 60 inches: clay

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components**Kingsbury**

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent

Farmington

Percent of map unit: 5 percent

Hydric soil rating: No

Eroded soils

Percent of map unit: 3 percent

Hydric soil rating: No

Hudson

Percent of map unit: 2 percent

Hydric soil rating: No

W—Water**Map Unit Setting**

National map unit symbol: 1qdsb

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Data Source Information

Soil Survey Area: Washington County, New York

Survey Area Data: Version 21, Sep 1, 2021

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Washington County, New York

BeB—Belgrade silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9xyn

Elevation: 80 to 620 feet

Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Belgrade and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Belgrade**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Glaciolacustrine or eolian deposits comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 24 inches: silt loam
H3 - 24 to 65 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components**Wallington**

Percent of map unit: 5 percent
Hydric soil rating: No

Rhinebeck

Percent of map unit: 5 percent

Hydric soil rating: No

Oakville

Percent of map unit: 5 percent

Hydric soil rating: No

Hudson

Percent of map unit: 5 percent

Hydric soil rating: No

Hartland

Percent of map unit: 5 percent

Hydric soil rating: No

CIA—Claverack loamy fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9xyy

Elevation: 600 to 1,800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Claverack and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Claverack

Setting

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand

H2 - 8 to 33 inches: loamy fine sand

H3 - 33 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components**Cosad**

Percent of map unit: 8 percent
Hydric soil rating: No

Hudson

Percent of map unit: 4 percent
Hydric soil rating: No

Oakville

Percent of map unit: 4 percent
Hydric soil rating: No

Belgrade

Percent of map unit: 4 percent
Hydric soil rating: No

CIB—Claverack loamy fine sand, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 9xyz
Elevation: 600 to 1,800 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Claverack and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Claverack**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand

H2 - 8 to 33 inches: loamy fine sand

H3 - 33 to 80 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F142XB018VT - Moist Lake Plain

Hydric soil rating: No

Minor Components

Cosad

Percent of map unit: 8 percent

Hydric soil rating: No

Oakville

Percent of map unit: 6 percent

Hydric soil rating: No

Hudson

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 2 percent

Cv—Covington silty clay loam

Map Unit Setting

National map unit symbol: 9xz1

Elevation: 50 to 1,000 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Covington and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Covington**Setting**

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous clayey glaciolacustrine deposits or glaciomarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 13 inches: silty clay
H3 - 13 to 27 inches: clay
H4 - 27 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: F142XB007VT - Wet Clayplain Depression
Hydric soil rating: Yes

Minor Components**Kingsbury**

Percent of map unit: 8 percent
Hydric soil rating: No

Madalin

Percent of map unit: 5 percent

Landform: Depressions
Hydric soil rating: Yes

Rhinebeck

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

FCC—Farmington-Rock outcrop association, nearly level through moderately steep**Map Unit Setting**

National map unit symbol: 9xz2
Elevation: 100 to 900 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 50 percent
Rock outcrop: 20 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington**Setting**

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 6 inches: loam
H2 - 6 to 18 inches: loam
H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F142XB010NY - Shallow Rich Till Upland
Hydric soil rating: No

Description of Rock Outcrop**Properties and qualities**

Slope: 3 to 15 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydric soil rating: Unranked

Minor Components**Amenia**

Percent of map unit: 8 percent
Hydric soil rating: No

Pittsfield

Percent of map unit: 8 percent
Hydric soil rating: No

Vergennes

Percent of map unit: 7 percent
Hydric soil rating: No

Kingsbury

Percent of map unit: 7 percent
Hydric soil rating: No

FCF—Farmington-Rock outcrop association, steep and very steep**Map Unit Setting**

National map unit symbol: 9xz3
Elevation: 100 to 900 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmington and similar soils: 70 percent
Rock outcrop: 20 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington

Setting

Landform: Till plains, ridges, benches

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 18 inches: loam

H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 50 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F142XB010NY - Shallow Rich Till Upland

Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 25 to 50 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydric soil rating: Unranked

Minor Components

Pittsfield

Percent of map unit: 6 percent

Hydric soil rating: No

Palatine

Percent of map unit: 3 percent

Hydric soil rating: No

Amenia

Percent of map unit: 1 percent

Hydric soil rating: No

FL—Fluvaquents

Map Unit Setting

National map unit symbol: 9xz4

Elevation: 300 to 1,800 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Alluvium with highly variable texture

Typical profile

H1 - 0 to 11 inches: mucky silt loam

H2 - 11 to 72 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Depth to water table: About 0 to 18 inches

Frequency of flooding: NoneFrequent

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Minor Components**Limerick**

Percent of map unit: 6 percent

Landform: Flood plains

Hydric soil rating: Yes

Teel

Percent of map unit: 6 percent

Hydric soil rating: No

Hamlin

Percent of map unit: 5 percent

Hydric soil rating: No

Saco

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Palms

Percent of map unit: 3 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

HcB—Hartland very fine sandy loam, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 9xzh

Elevation: 50 to 500 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Hartland and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hartland**Setting**

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Silty eolian or glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: very fine sandy loam
H2 - 10 to 26 inches: very fine sandy loam
H3 - 26 to 75 inches: very fine sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY017NH - Well Drained Lake Plain
Hydric soil rating: No

Minor Components**Belgrade**

Percent of map unit: 6 percent
Hydric soil rating: No

Wallington

Percent of map unit: 5 percent
Hydric soil rating: No

Oakville

Percent of map unit: 5 percent
Hydric soil rating: No

Hamlin

Percent of map unit: 4 percent
Hydric soil rating: No

KbA—Kingsbury silty clay, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 9xzv
Elevation: 80 to 600 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Kingsbury and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kingsbury

Setting

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Calcareous, clayey glaciomarine deposits or glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silty clay

H2 - 8 to 28 inches: clay

H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: F142XB006NY - Moist Clayplain

Hydric soil rating: No

Minor Components

Vergennes

Percent of map unit: 5 percent

Hydric soil rating: No

Covington

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Farmington

Percent of map unit: 4 percent

Hydric soil rating: No

Hollis

Percent of map unit: 3 percent

Hydric soil rating: No

Charlton

Percent of map unit: 3 percent

Hydric soil rating: No

KbB—Kingsbury silty clay, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 9xzw

Elevation: 80 to 600 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Kingsbury and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kingsbury**Setting**

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Calcareous, clayey glaciomarine deposits or glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silty clay

H2 - 8 to 28 inches: clay

H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F142XB006NY - Moist Clayplain
Hydric soil rating: No

Minor Components**Covington**

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Vergennes

Percent of map unit: 5 percent
Hydric soil rating: No

Farmington

Percent of map unit: 4 percent
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Hydric soil rating: No

Hollis

Percent of map unit: 3 percent
Hydric soil rating: No

NAC—Nassau shaly silt loam, undulating through hilly**Map Unit Setting**

National map unit symbol: 9xzz
Elevation: 600 to 1,800 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Nassau and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau**Setting**

Landform: Till plains, ridges, benches

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 9 inches: channery silt loam

H2 - 9 to 19 inches: very channery loam

H3 - 19 to 23 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: F144AY033MA - Shallow Dry Till Uplands

Hydric soil rating: No

Minor Components

Bernardston

Percent of map unit: 7 percent

Hydric soil rating: No

Hudson

Percent of map unit: 6 percent

Hydric soil rating: No

Rhinebeck

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent

Palms

Percent of map unit: 2 percent

Landform: Marshes, swamps

Hydric soil rating: Yes

NcA—Natchaug muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68z

Elevation: 0 to 1,550 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 145 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oa1 - 0 to 12 inches: muck

Oa2 - 12 to 31 inches: muck

2Cg1 - 31 to 39 inches: silt loam

2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.01 to 14.17 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 25 percent

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Very high (about 17.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Ecological site: F144AY042NY - Semi-Rich Organic Wetlands

Hydric soil rating: Yes

Minor Components

Catden

Percent of map unit: 8 percent

Landform: Depressions, depressions, depressions

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Limerick

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Sun

Percent of map unit: 4 percent

Landform: Depressions, hills

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Halsey

Percent of map unit: 3 percent

Landform: Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

OKE—Oakville loamy fine sand, moderately steep and steep

Map Unit Setting

National map unit symbol: 9y02

Elevation: 600 to 1,200 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Oakville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oakville

Setting

Landform: Terraces, outwash plains, deltas

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy eolian, beach ridge, or glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: loamy fine sand

H2 - 9 to 24 inches: loamy fine sand

H3 - 24 to 60 inches: fine sand

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Hoosic

Percent of map unit: 6 percent

Hydric soil rating: No

Otisville

Percent of map unit: 6 percent

Hydric soil rating: No

Hudson

Percent of map unit: 5 percent

Hydric soil rating: No

Vergennes

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

OP—Orthents and Psamments

Map Unit Setting

National map unit symbol: 9y03

Elevation: 80 to 330 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Orthents and similar soils: 50 percent

Psamments and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orthents

Setting

Parent material: Dredge spoils

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 60 inches: channery loam

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Depth to water table: About 36 to 72 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Hydric soil rating: No

Description of Psamments

Setting

Parent material: Dredge spoils

Typical profile

H1 - 0 to 10 inches: fine sand

H2 - 10 to 60 inches: coarse sand

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components**Herkimer**

Percent of map unit: 2 percent

Hydric soil rating: No

Covington

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Fredon

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Claverack

Percent of map unit: 2 percent

Hydric soil rating: No

Rhinebeck

Percent of map unit: 1 percent

Hydric soil rating: No

Hoosic

Percent of map unit: 1 percent

Hydric soil rating: No

VeB—Vergennes silty clay loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 2rvsk

Elevation: 100 to 510 feet

Mean annual precipitation: 31 to 59 inches

Mean annual air temperature: 39 to 48 degrees F

Frost-free period: 120 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Vergennes and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes**Setting**

Landform: Lake terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous clayey estuarine deposits derived from limestone and/or calcareous clayey glaciolacustrine deposits derived from limestone

Typical profile

Ap - 0 to 8 inches: silty clay loam

B/E - 8 to 10 inches: clay

Bt - 10 to 22 inches: clay

BC - 22 to 29 inches: silty clay

C1 - 29 to 37 inches: silty clay

C2 - 37 to 45 inches: silty clay

C3 - 45 to 79 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components**Cayuga**

Percent of map unit: 5 percent

Landform: Drumlinoid ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kingsbury

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Wilpoint

Percent of map unit: 3 percent
Landform: Lake terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Farmington

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

VeC—Vergennes silty clay loam, 6 to 12 percent slopes**Map Unit Setting**

National map unit symbol: 9y0y
Elevation: 50 to 1,000 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Vergennes and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam

H2 - 6 to 13 inches: silty clay

H3 - 13 to 25 inches: clay

H4 - 25 to 60 inches: clay

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Kingsbury

Percent of map unit: 5 percent

Hydric soil rating: No

Farmington

Percent of map unit: 5 percent

Hydric soil rating: No

Hollis

Percent of map unit: 5 percent

Hydric soil rating: No

Hudson

Percent of map unit: 3 percent

Hydric soil rating: No

Eroded soils

Percent of map unit: 2 percent

Hydric soil rating: No

VeD—Vergennes silty clay loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 9y0z

Elevation: 50 to 1,000 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Vergennes and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes

Setting

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Riser

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam

H2 - 6 to 13 inches: silty clay

H3 - 13 to 25 inches: clay

H4 - 25 to 60 inches: clay

Properties and qualities

Slope: 12 to 20 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components**Kingsbury***Percent of map unit: 5 percent**Hydric soil rating: No***Unnamed soils***Percent of map unit: 5 percent***Farmington***Percent of map unit: 5 percent**Hydric soil rating: No***Eroded soils***Percent of map unit: 3 percent**Hydric soil rating: No***Hudson***Percent of map unit: 2 percent**Hydric soil rating: No***W—Water****Map Unit Setting***National map unit symbol: 1qdsb**Mean annual precipitation: 35 to 42 inches**Mean annual air temperature: 45 to 48 degrees F**Frost-free period: 110 to 175 days**Farmland classification: Not prime farmland***Map Unit Composition***Water: 100 percent**Estimates are based on observations, descriptions, and transects of the mapunit.***Data Source Information**

Soil Survey Area: Washington County, New York

Survey Area Data: Version 21, Sep 1, 2021

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Washington County, New York

Ca—Catden muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t2qk

Elevation: 0 to 1,430 feet

Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Catden and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Catden**Setting**

Landform: Depressions, depressions, fens, depressions, kettles, marshes, bogs, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

Typical profile

Oa1 - 0 to 2 inches: muck
Oa2 - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components**Canandaigua**

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Natchaug

Percent of map unit: 5 percent
Landform: Depressions, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Timakwa

Percent of map unit: 5 percent
Landform: Swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Alden

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

CIB—Claverack loamy fine sand, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 9xyz
Elevation: 600 to 1,800 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Claverack and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Claverack**Setting**

Landform: Lake plains
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand

H2 - 8 to 33 inches: loamy fine sand

H3 - 33 to 80 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F142XB018VT - Moist Lake Plain

Hydric soil rating: No

Minor Components

Cosad

Percent of map unit: 8 percent

Hydric soil rating: No

Oakville

Percent of map unit: 6 percent

Hydric soil rating: No

Hudson

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 2 percent

Cv—Covington silty clay loam

Map Unit Setting

National map unit symbol: 9xz1

Elevation: 50 to 1,000 feet

Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Covington and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Covington**Setting**

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous clayey glaciolacustrine deposits or glaciomarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 13 inches: silty clay
H3 - 13 to 27 inches: clay
H4 - 27 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: F142XB007VT - Wet Clayplain Depression
Hydric soil rating: Yes

Minor Components**Kingsbury**

Percent of map unit: 8 percent
Hydric soil rating: No

Madalin

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Rhinebeck

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent

FaB—Farmington loam, 0 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 9xz5

Elevation: 100 to 900 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Farmington and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmington**Setting**

Landform: Till plains, ridges, benches

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 18 inches: loam

H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
(0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY035MA - Shallow Semi-Rich Well Drained
Till Uplands
Hydric soil rating: No

Minor Components**Pittsfield**

Percent of map unit: 6 percent
Hydric soil rating: No

Kingsbury

Percent of map unit: 5 percent
Hydric soil rating: No

Amenia

Percent of map unit: 5 percent
Hydric soil rating: No

Vergennes

Percent of map unit: 5 percent
Hydric soil rating: No

Palatine

Percent of map unit: 4 percent
Hydric soil rating: No

KbA—Kingsbury silty clay, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 9xzv
Elevation: 80 to 600 feet
Mean annual precipitation: 35 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Kingsbury and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kingsbury**Setting**

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Calcareous, clayey glaciomarine deposits or
glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silty clay

H2 - 8 to 28 inches: clay

H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1
inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: F142XB006NY - Moist Clayplain

Hydric soil rating: No

Minor Components

Vergennes

Percent of map unit: 5 percent

Hydric soil rating: No

Covington

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Farmington

Percent of map unit: 4 percent

Hydric soil rating: No

Hollis

Percent of map unit: 3 percent

Hydric soil rating: No

Charlton

Percent of map unit: 3 percent

Hydric soil rating: No

VeB—Vergennes silty clay loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2rvsk

Elevation: 100 to 510 feet

Mean annual precipitation: 31 to 59 inches

Mean annual air temperature: 39 to 48 degrees F

Frost-free period: 120 to 175 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Vergennes and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vergennes

Setting

Landform: Lake terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Calcareous clayey estuarine deposits derived from limestone and/or calcareous clayey glaciolacustrine deposits derived from limestone

Typical profile

Ap - 0 to 8 inches: silty clay loam

B/E - 8 to 10 inches: clay

Bt - 10 to 22 inches: clay

BC - 22 to 29 inches: silty clay

C1 - 29 to 37 inches: silty clay

C2 - 37 to 45 inches: silty clay

C3 - 45 to 79 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components**Cayuga**

Percent of map unit: 5 percent

Landform: Drumlinoid ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Kingsbury

Percent of map unit: 5 percent

Landform: Lake terraces

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Wilpoint

Percent of map unit: 3 percent

Landform: Lake terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Hydric soil rating: No

Farmington

Percent of map unit: 2 percent

Landform: Hills

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

W—Water**Map Unit Setting**

National map unit symbol: 1qdsb

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Wa—Wallington silt loam, sandy substratum**Map Unit Setting**

National map unit symbol: 9y10

Elevation: 80 to 850 feet

Mean annual precipitation: 35 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 175 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Wallington, sandy substratum, and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wallington, Sandy Substratum**Setting**

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Glaciolacustrine or eolian deposits high in silt and very fine sand

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 17 inches: silt loam

H3 - 17 to 48 inches: silt loam

H4 - 48 to 80 inches: stratified loamy fine sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 15 to 24 inches to fragipan

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components**Rhinebeck**

Percent of map unit: 5 percent
Hydric soil rating: No

Hartland

Percent of map unit: 5 percent
Hydric soil rating: No

Belgrade

Percent of map unit: 5 percent
Hydric soil rating: No

Madalin

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Washington County, New York
Survey Area Data: Version 21, Sep 1, 2021

ATTACHMENT 4 TABLES

Table 4-1 Summary of Wetlands Within the Project Corridor ¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification ²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
Old Route 4						
20000+00 C-401	CJJJ	PEM	Unnamed Tributary to Champlain Canal	8,597	USACE	43.477, -73.430
20008+75 C-401	CKKK	PSS	Unnamed Tributary to Champlain Canal (CS32)	0	USACE	Calculation Pending
20021+25 C-401	CLLL	PSS	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20036+75 C-402	CMMM	PSS	Unnamed Tributary to Champlain Canal	438	USACE	Calculation Pending
20049+00 C-402	CNNN	PSS	Unnamed Tributary to Champlain Canal	293	USACE	Calculation Pending
20054+75 C-402	COOO	PSS	Unnamed Tributary to Champlain Canal	11,441	USACE	Calculation Pending
20062+00 C-403	CPPP	PEM	Unnamed Tributary to Champlain Canal	14,571	USACE	Calculation Pending
		PSS		16,101		
20077+75 C-403	CQQQ	PSS	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20079+00 C-403	CRRR	PSS	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20083+50 C-403	CSSS	PSS	Unnamed Tributary to Champlain Canal	2476	USACE	Calculation Pending
20085+00 C-403	CTTT	PFO	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
20088+75 C-403	CVVV	PSS	Unnamed Tributary to Champlain Canal	157	USACE	Calculation Pending
20091+50 C-404	CUUU	PEM	Unnamed Tributary to Champlain Canal	672	USACE	Calculation Pending
20093+75 C-404	CWWW	PFO	Unnamed Tributary to Champlain Canal	31,154	USACE	Calculation Pending
		PSS		2,821		
20100+25 C-404	CXXX	PSS	Unnamed Tributary to Champlain Canal (CS35)	2,009	USACE	Calculation Pending
20110+00 C-404	CYYY	PEM	Unnamed Tributary to Champlain Canal (Outlet to Lake Champlain via culvert under road)	7,256	USACE	Calculation Pending
		PUB		1,616		
		PSS		2,512		
		PFO		0		
20121+25 C-405	CZZZ	PFO	Unnamed Tributary to Champlain Canal	31,695	USACE	Calculation Pending
		PSS		1,342		
20139+00 C-405	CAZ	PFO	Unnamed Tributary to Champlain Canal	2,585	USACE	Calculation Pending
20141+00 C-405	CBZ	PEM	Unnamed Tributary to Champlain Canal	1,287	USACE, NYSDEC (FA-13)	Calculation Pending
		PFO		12,283		
20146+50 C-405	CCZ	PSS	Unnamed Tributary to Champlain Canal	507	USACE	Calculation Pending
		PFO		3,960		
20155+25 C-406	CDZ	PFO	Unnamed Tributary to Champlain Canal	1,547	USACE	Calculation Pending

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
20161+50 C-406	CEZ	PSS	Unnamed Tributary to Champlain Canal	2,018	USACE	Calculation Pending
20165+75 C-406	CGZ	PFO	Unnamed Tributary to Champlain Canal	3,175	USACE, NYSDEC (FA-13)	Calculation Pending
20166+00 C-406	CFZ	PSS	Unnamed Tributary to Champlain Canal	586	USACE	Calculation Pending
Access Road C-203	GP2-A	PEM	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
Access Road C-203	GP2-B	PEM	Unnamed Tributary to Champlain Canal	336	USACE	Calculation Pending
Access Road C-203	GP2-C	PEM	Unnamed Tributary to Champlain Canal	613	USACE	Calculation Pending
Access Road C-203	GP2-D	PSS	Unnamed Tributary to Champlain Canal	249	USACE, NYSDEC (FA-13)	Calculation Pending
Access Road C-203	GP2-E	PEM	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20173+00 C-406	P2-CA	PFO	Unnamed Tributary to Champlain Canal	0	USACE, NYSDEC (FA-13)	Calculation Pending
20176+00 C-406	CIZ	PSS	Unnamed Tributary to Champlain Canal	3,883	USACE	Calculation Pending
20178+50 C-406	CHZ	PFO	Unnamed Tributary to Champlain Canal	26,069	USACE	Calculation Pending
CP Rail						
20215+00 C-408	G-R-Z	PFO	Unnamed Tributary to Champlain Canal	11,069	USACE	Calculation Pending

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
20225+50 C-408	G-R-AA	PFO	Unnamed Tributary to Champlain Canal	433	USACE	Calculation Pending
20231+00 C-408	G-R-BB	PFO	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20236+00 C-408	G-R-CC	PFO	Unnamed Tributary to Champlain Canal	5,743	USACE	Calculation Pending
20236+00 C-408	P2-CC2	PEM	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20240+50 C-409	G-R-DD	PFO	Unnamed Tributary to Champlain Canal (G-R-S-P)	38,851	USACE	Calculation Pending
20270+00 C-409	G-R-EE / P2-EE	PFO	Unnamed Tributary to Champlain Canal (G-R-S-Q)	3120	USACE	Calculation Pending
		PSS		11,339		
20278+50 C-410 & C-205	P2-E	PSS	Unnamed Tributary to Champlain Canal	1,640	USACE	Calculation Pending
		PEM		1,280		
20280+00 C-410 & C-205	P2-F	PSS	Unnamed Tributary to Champlain Canal	1,955	USACE	Calculation Pending
20296+25 C-410	G-R-FF	PEM	Unnamed Tributary to Champlain Canal	7,188	USACE	Calculation Pending
		PFO		3,883		Calculation Pending
20308+25	G-R-GG	PEM		2967	USACE	

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
C-411		PFO	Unnamed Tributary to Champlain Canal (G-R-S-S)	123,560		Calculation Pending
20333+50 C-412	P2-CB	PSS	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20335+25 C-412	CC	PFO	Unnamed Tributary to Champlain Canal	379	USACE	Calculation Pending
		PEM		34,689		
		PSS		3,984		
20357+50 C-412 / C-206	P2-H	PEM	Unnamed Tributary to Champlain Canal	2,526	USACE	Calculation Pending
		PSS		242		
20357+50 C-412 / C-206	P2-I	PSS	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20376+50 C-413	G-R-HH	PEM	Unnamed Tributary to Champlain Canal	969	USACE	Calculation Pending
		PSS		6,508		
20382+50 C-413	G-R-II	PEM	Unnamed Tributary to Champlain Canal	2,355	USACE	Calculation Pending
		PSS		328		
20383+00 C-413	P2-CD	PSS	Unnamed Tributary to Champlain Canal	145,921	USACE	Calculation Pending
		PFO		11,510		
20389+25 C-413	G-R-JJ	PEM	Unnamed Tributary to Champlain Canal	4410	USACE	Calculation Pending
		PSS		20939		
20425+00 C-415	G-R-KK	PSS	Unnamed Tributary to Champlain Canal (G-R-S-U)	0	USACE	Calculation Pending

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
20431+75 C-415	P2-CE	PEM	Unnamed Tributary to Champlain Canal	11,061	USACE	Calculation Pending
20438+75 C-415	P2-CF	PEM	Unnamed Tributary to Champlain Canal	16,935	USACE	Calculation Pending
20446+50 C-415 & C-208	P2-CG/P2-G	PEM	Unnamed Tributary to Champlain Canal	8,845	USACE	Calculation Pending
20451+50 C-416 & C-201	P2-CH/P2-C	PEM	Unnamed Tributary to Champlain Canal	61,990	USACE	Calculation Pending
20464+50 C-416	P2-D	PEM	Unnamed Tributary to Champlain Canal	2,227	USACE	Calculation Pending
20464+50/20465+00 C-416 & C-201	G-R-LL/P2-A	PEM	Unnamed Tributary to Champlain Canal	1,551	USACE	Calculation Pending
20467+50 C-416	P2-B	PEM	Unnamed Tributary to Champlain Canal	0	USACE	Calculation Pending
20473+00 C-416	G-R-MM	PSS	Unnamed Tributary to Champlain Canal	101,529	USACE	Calculation Pending
20503+50 C-417	G-R-NN	PEM	Unnamed Tributary to Champlain Canal	139,450	USACE	Calculation Pending
20511+00 C-418 / C-217	Wet P2-J	PEM	Unnamed Tributary to Champlain Canal (connects to wetland G-R-NN)	8,053	USACE	Calculation Pending
		PSS		10,295		
20548+50 C-419	G-R-OO	PEM	Unnamed Tributary to Champlain Canal (G-R-S-X)	63,887	USACE	Calculation Pending
		PSS		11,568		

Table 4-1 Summary of Wetlands Within the Project Corridor¹						
Approximate Station & Dwg. No.	Wetland ID	Cowardin Classification²	Associated Water Course	Area w/in JD Limits Square Feet (sf)	USACE, APA, & NYSDEC Jurisdiction	Coordinates (lat., long.)
20581+50 C-420	G-R-PP	PEM	Unnamed Tributary to Champlain Canal	16,967	USACE	Calculation Pending
20609+25 C-421	G-R-QQ	PEM	Unnamed Tributary to Champlain Canal	4,025	USACE	Calculation Pending
20613+50 C-421	G-R-RR	PEM	Unnamed Tributary to Champlain Canal (G-R-S-Y)	414618	USACE, NYSDEC (HF-10)	Calculation Pending
20738+50 C-425	CP2-A	PEM	Unnamed Tributary to Champlain Canal	1,562	USACE	Calculation Pending
20748+00 C-426 & C-214	GP2-EE	PUB	Old Champlain Canal (Bond Creek)	83,144	USACE	Calculation Pending
20757+25 C-426	G-R-SS	PEM	Unnamed Tributary to Champlain Canal	227,263	USACE	Calculation Pending
		PSS		167,914		

¹ Wetlands identified include both wetlands that are directly crossed by the overland transmission cable corridor as well as wetlands that are adjacent to the Project Corridor that were delineated during field surveys.

² Cowardin et al. 1979 categories include: Palustrine Emergent (PEM), Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), and palustrine unconsolidated bottom (PUB).

Table 4-2 Summary of Waterbodies within the Project Corridor									
Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID & NYSDEC Regulation	Flow Status	Substrate	Width (ft.)¹	Depth (ft.)¹	Length w/in JD Boundary	Coordinates (lat., long.)
Old Route 4									
20007+75 C-401	Unnamed Tributary to Champlain Canal	C/C	CS32 830-478	Perennial	Mineral soil	25	2	130	43.474973 -73.429681
20026+50 C-401	Unnamed Tributary to Champlain Canal	Unmapped	CS34	Intermittent	Bedrock/ mineral soil	7	1.5	36	43.470562 -73.433258
20106+50 C-404	Unnamed Tributary to Champlain Canal	C/C	CS35 830-469	Perennial	Mineral soil/ cobble	6	1	32	43.451012 -73.445654
20134+00 C-405	Unnamed Tributary to Champlain Canal	C/C	CS36 830-469	Perennial	Mineral soil	8	2	28	43.443922 -73.447433

Table 4-2 Summary of Waterbodies within the Project Corridor									
Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID & NYSDEC Regulation	Flow Status	Substrate	Width (ft.) ¹	Depth (ft.) ¹	Length w/in JD Boundary	Coordinates (lat., long.)
20173+00 C-203	Unnamed Tributary to Champlain Canal	Unmapped	GP2-S1	Intermittent	Cobble/Sand	4	1	46	43.438016 -73.456707
20173+00 C-203	Unnamed Tributary to Champlain Canal	Unmapped	GP2-S2	Intermittent	Bedrock	6	3	67	43.437467 -73.456818
20173+00 C-203	Unnamed Tributary to Champlain Canal	Unmapped	GP2-S3	Perennial	Pebble/Silt	2	1	43	43.436965 -73.45601
CP Rail									
20217+25 C-408	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-O	Intermittent	Sand/cobble	2	0.5	67	43.42854 -73.468416
20256+00 C-409	Unnamed Tributary to	C/C	G-R-S-P 830-485	Perennial	Silt	3	1	122	43.424143 -73.481728

Table 4-2 Summary of Waterbodies within the Project Corridor									
Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID & NYSDEC Regulation	Flow Status	Substrate	Width (ft.)¹	Depth (ft.)¹	Length w/in JD Boundary	Coordinates (lat., long.)
	Champlain Canal								
20285+00 C-410	Halfway Creek	C/C	G-R-S-Q 830-486	Perennial	Silt/cobble	15	2	60	43.416517 -73.485342
20301+50 C-411	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-R	Intermittent	Silt/cobble-gravel	4	0.5	41	43.412082 -73.485816
20316+50 C-411	Unnamed Tributary to Champlain Canal	C/C	G-R-S-S 830-469	Intermittent	Silt	5	0.5	44	43.408029 -73.485574
20421+00 C-415	Unnamed Tributary to Champlain Canal	C/C	G-R-S-T 830-516	Perennial	Silt	6	2	55	43.379781 -73.489285
20421+00 C-415	Unnamed Tributary to Champlain Canal	C/C	P2-S1 830-516	Perennial	Silt/cobble-gravel	20	4	57	42.37981, -73.48965

Table 4-2 Summary of Waterbodies within the Project Corridor									
Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID & NYSDEC Regulation	Flow Status	Substrate	Width (ft.)¹	Depth (ft.)¹	Length w/in JD Boundary	Coordinates (lat., long.)
20425+50 C-415	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-U	Intermittent	Silt/cobble	3	0.5	21	43.378564 -73.489208
20436+00 C-415	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-V	Intermittent	Silt/cobble	3	0.5	16	43.375666 -73.489241
20501+50 C-417	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-W	Perennial	Silt	15	2	57	43.358402 -73.495336
20548+50 C-419	Old Champlain Canal	C/C	G-R-S-X 830-520	Perennial	Silt	10	6	26	43.346589 -73.502035
20699+00 C-424	Unnamed Tributary to Champlain Canal	Unmapped	G-R-S-Y	Perennial	Silt/pebble	3	0.5	36	43.312994 -73.534731
20745+50 C-425	Bond Creek	C/C	G-R-S-Z 941-386	Perennial	Silt	30	5	147	43.303192 -73.545799

¹ Bankfull width and bankfull depth measurements were estimated in the field.

Table 4-3
Soil Description Summary

County	Soil Name	Symbol	% Slopes	Hydric (y/n)	Drainage Class
Hydric Soils					
Washington	Carlisle muck	Ca	0-2	Y	Very Poorly Drained
Washington	Catden Muck	Ca	0-2	Y	Very Poorly Drained
Washington	Covington silty clay loam	Cv	0-2	Y	Poorly Drained
Washington	Fluvaquents	FL	0-3	Y	Poorly Drained
Washington	Limerick silt loam	Lm	0-2	Y	Poorly Drained
Washington	Palms muck	Pm	0-6	Y	Very Poorly Drained
Washington	Saco silt loam	Sa	0-2	Y	Very Poorly Drained
Washington	Saprists, Aquepts, and Aquepts	SB	0-2	Y	Very Poorly Drained
Non-hydric Soils					
Washington	Belgrade silt loam	BeB	2-6	N	Moderately Well Drained
Washington	Claverack loamy fine sand	CIA	0-2	N	Moderately Well Drained
Washington	Claverack loamy fine sand	CIB	2-6	N	Moderately Well Drained
Washington	Cosad fine sandy loam	Cs	0-2	N	Somewhat Poorly Drained
Washington	Farmington-Rock outcrop association, nearly level through moderately steep	FCC	-	N	Well Drained
Washington	Farmington-Rock outcrop association, steep and very steep	FCF	25-50	N	Well Drained
Washington	Farmington loam	FaB	0-8	N	Well Drained
Washington	Fredon silt loam	Fr	0-2	N	Somewhat Poorly Drained
Washington	Hartland very fine sandy loam	HcA	0-2	N	Well Drained

Table 4-3
Soil Description Summary

County	Soil Name	Symbol	% Slopes	Hydric (y/n)	Drainage Class
Washington	Hartland very fine sandy loam	HcB	2-6	N	Well Drained
Washington	Hartland very fine sandy loam	HcC	6-12	N	Well Drained
Washington	Hartland very fine sandy loam	HcD	12-20	N	Well Drained
Washington	Hollis-Charlton association, moderately steep and steep	HLE	15-25	N	Well Drained
Washington	Hollis-Rock outcrop association, gently sloping and sloping	HNC	-	N	Somewhat Excessively Drained
Washington	Hudson and Vergennes soils, steep and very steep	HWE	-	N	Moderately Well Drained
Washington	Hudson silt loam	HvC	6-12	N	Moderately Well Drained
Washington	Kingsbury silty clay	KbA	0-2	N	Somewhat Poorly Drained
Washington	Kingsbury silty clay	KbB	2-6	N	Somewhat Poorly Drained
Washington	Nassau shaly silt loam, undulating through hilly	NAC	3-15	N	Somewhat Excessively Drained
Washington	Oakville loamy fine sand	OaB	0-5	N	Excessively Drained
Washington	Oakville loamy fine sand	OaC	5-15	N	Well Drained
Washington	Oakville loamy fine sand, moderately steep and steep	OKE	15-25	N	Well Drained
Washington	Orthents and Psamments	OP	0-15	N	Well Drained
Washington	Paltine shaly silt loam	PaB	3-8	N	Well Drained
Washington	Pits, quarry	Ps	-	N	-
Washington	Vergennes silty clay loam	VeB	3-8	N	Moderately Well Drained
Washington	Vergennes silty clay loam	VeC	6-12	N	Moderately Well Drained
Washington	Vergennes silty clay loam	VeD	12-20	N	Moderately Well Drained
Washington	Wallington silt loam, sandy substratum	Wa	0-2	N	Somewhat Poorly Drained

ATTACHMENT 5
WETLANDS AND WATERBODIES DELINEATION MAPPING

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LEGEND & ABBREVIATIONS

	EXIST. FIBER OPTIC LINE HANDHOLE
	EXIST. FIBER OPTIC LINE PEDESTAL
	EXIST. FIBER OPTIC LINE DOGHOUSE
	EXIST. FIBER OPTIC LINE MANHOLE
	EXIST. FIBER OPTIC LINE VAULT
	EXIST. FIBER OPTIC LINE BORE PIT
	EXIST. FIBER OPTIC LOCK BOX
	EXIST. GROUND ROD
	EXIST. FIBER OPTIC MARKER POST
	EXIST. FIBER OPTIC BOX
	EXIST. FIBER STORAGE
	EXIST. FIRE HYDRANT
	EXIST. WATER VALVE
	EXIST. WATER MANHOLE
	EXIST. WATER MARKER
	EXIST. SANITARY SEWER MANHOLE
	EXIST. SANITARY SEWER VENT
	EXIST. STORM SEWER MANHOLE
	EXIST. STORM SEWER CATCH BASIN
	EXIST. CULVERT INVERT
	EXIST. GAS MANHOLE
	EXIST. GAS VALVE
	EXIST. GAS MARKER
	EXIST. GAS PIPELINE VENT
	EXIST. LIGHT POLE
	EXIST. UTILITY POLE
	EXIST. ELEC. POLE
	EXIST. TRAFFIC LIGHT
	EXIST. ELEC. METER
	EXIST. ELEC. MANHOLE
	EXIST. ELEC. TRANSFORMER
	EXIST. ELEC. VAULT
	EXIST. ELEC. HANDHOLE
	EXIST. ELEC. PEDESTAL/BOX
	EXIST. ELEC. MARKER POST
	EXIST. ELEC. GUY ANCHOR/WIRE
	EXIST. TELE. RISER/BOX
	EXIST. TELE. MANHOLE
	EXIST. TELE. HANDHOLE
	EXIST. TELE. VAULT
	EXIST. TELE. PEDESTAL
	EXIST. TELE. DOGHOUSE
	EXIST. TELE. MARKER POST
	EXIST. TELE. JUNCTION BOX
	EXIST. TRAFFIC SIGNAL BOX
	EXIST. CELL TOWER
	EXIST. CABLE BOX
	EXISTING MANHOLE UNKNOWN
	EXISTING UTILITY BOX UNKNOWN
	EXISTING ANTENNA
	EXISTING CAPPED IRON ROD
	EXISTING IRON PIPE
	EXISTING CONCRETE MONUMENT
	EXISTING POST
	EXISTING REFLECTOR MARKER
	EXISTING SYMBOL

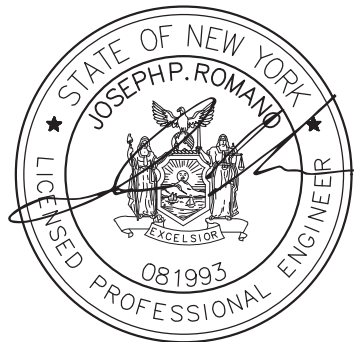
	EXISTING SIGN
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	EXIST. STRUCTURE MAILBOX
	EXIST. GAS LINE
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	EXIST. FIBER OPTIC
	EXIST. OVERHEAD TELE.
	EXIST. UNDERGROUND ELEC.
	EXIST. OVERHEAD ELEC.
	EXIST. CULVERT
	EXIST. SANITARY SEWER
	EXIST. STORM SEWER
	EXIST. POTABLE WATER LINE
	EXIST. FUEL LINE
	EXIST. RAILROAD TRACK
	CERTIFIED ROUTE PROVIDED BY CHPE KMZ
	RANDALL PREFERRED PROVIDED BY CHPE KMZ
	EXIST. CONTOUR, INDEX
	EXIST. CONTOUR, DEPRESSION INDEX
	EXIST. CONTOUR, INTERMEDIATE
	EXIST. CONTOUR, DEPRESSION INTERMEDIATE
	EXIST. SPOT ELEVATION
	EXIST. LANDSCAPE / STORAGE AREA
	EXIST. NATURAL BOULDER
	EXIST. NATURAL SHRUB LINE
	EXIST. NATURAL TREE LINE
	EXIST. NATURAL SINGLE TREE/BUSH
	EXIST. STRUCTURAL BUILDING
	EXIST. PAVED DRIVE
	EXIST. PAVED ROAD
	EXIST. PAVED SHOULDER
	EXIST. PAVED SIDEWALK
	EXIST. GUARDRAIL
	EXIST. TRAIL
	EXIST. FENCE
	EXIST. WALL
	EXIST. RETAINING WALL
	EXIST. RIGHT-OF-WAY
	EXIST. ABUTTER

	EXIST. WETLANDS
	EXIST. WETLAND FLAG
	PEM – PALUSTRINE EMERGENT
	PSS – PALUSTRINE SCRUB–SHRUB
	PFO – PALUSTRINE FORESTED
	PUB – PALUSTRINE UNCONSOLIDATED BOTTOM
	L1 – LACUSTRINE LIMNETIC
	L2 – LACUSTRINE LITTORAL
	NYSDEC FWW 100–FOOT ADJACENT BUFFER AREA
	GIS HISTORICAL WETLAND BOUNDARY
	JD BOUNDARY
	PROP. WETLAND PROTECTION FENCE
	PROP. COMPOST FILTER SOCK (OR SILT SOCK)
	PROP. TEMP MAJOR CONTOUR
	PROP. TEMP MINOR CONTOUR
	PROP. LIMITS OF WORK/DISTURBANCE
	PROP. LIMITS OF CLEARING/LIMITS OF WORK IN CLEARING AREAS
	PROP. CONCRETE WASHOUT
	PROP. TEMP ACCESS ROAD RTE (EXISTING ROAD OR SURFACE)
	PROP. TEMP REFURBISHED ACCESS ROAD
	PROP. TEMP ACCESS ROAD OR OFF SITE ACCESS ROAD
	PROP. TEMP TIMBER MATTING OR TEMP GEOTEXTILE FABRIC AND STONE
	PROP. SPLICE LOCATION
	PROP. SPLICE VAULT
	PROP. LINK BOX HANDHOLE
	PROP. FIBER SPLICE HANDHOLE
	PROP. BORING LOCATION
	PROP. ALIGNMENT STATIONING
	PROP. ALIGNMENT CENTERLINE
	PROP. LAYDOWN YARDS, PARKING, STORAGE & MUSTER AREA
	PROP. WORK AREAS
	PROP. TEMP EASEMENT
	PROP. PERM EASEMENT
	PROP. TEMP ACCESS EASEMENT
	CP RAIL MP CALL OUT

APP	APPROVED
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DB	DESIGNED BY
DEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEG	DEGREES
DR	DRIVE
DZ	DEVIATION ZONE
E	EASTING
ELECTRIC	ELECTRIC CABLE
ELEV	ELEVATION
EXIST	EXISTING
FIBER	FIBER OPTIC CABLE
FT	FEET
GAS	GAS PIPE
H	HORIZONTAL
HDD	HORIZONTAL DIRECTIONAL DRILLING
HVDC	HIGH–VOLTAGE DIRECT CURRENT TRANSMISSION LINE
INV	INVERT ELEVATION
LOW	LIMITS OF WORK
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NO	NUMBER
NY	NEW YORK
P#	PACKAGE #
PERM	PERMANENT
PROP.	PROPOSED
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REV	REVISION
ROW	RIGHT–OF–WAY
RT	RIGHT
RTE	ROUTE
SEWER	SANITARY SEWER PIPE
SH	SHEET
ST	STREET
STA	STATION
STORM	STORM DRAIN PIPE
TELECOM	TELECOMMUNICATIONS CABLE
TEMP	TEMPORARY
TR	THERMAL RESISTIVITY
TYP	TYPICAL
V	VERTICAL
WATER	WATERLINE

NOTES:

1. LIMIT OF WORK (LOW) – THE BOUNDARY IN WHICH ALL CONSTRUCTION ACTIVITIES, STOCKPILES MATERIAL, EQUIPMENT STORAGE, ACCESS, PARKING, GRADING, LANDSCAPING, RESTORATION, AND ANY OTHER CONSTRUCTION RELATED ACTIVITIES SHALL OCCUR. ADDITIONALLY, THE LOW IS THE BOUNDARY FOR ALL POTENTIAL DISTURBANCE DURING CONSTRUCTION. UNLESS OTHERWISE SPECIFIED, WHEN THE LIMIT OF CLEARING AND GRUBBING IS SHOWN ON THE PLANS, IT SHALL ALSO BE THE LOW. THE LOW INCLUDES THE AREA THAT WOULD BE CONSIDERED THE LIMIT OF DISTURBANCE (LOD).



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

0	03/22/2023	ISSUED FOR CONSTRUCTION SUBMISSION	JJE	JPR	
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP	

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY
LEGEND AND ABBREVIATIONS

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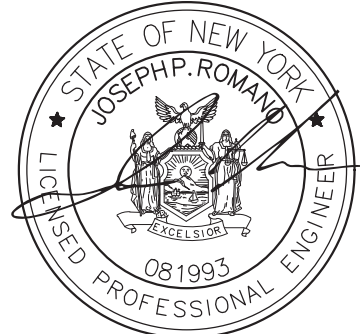
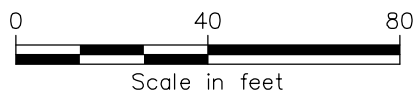
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DATE	03/22/2023

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STAGING AND LAYDOWN AREA NOTES:

1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION OF THE LAYDOWN AREA IN ACCORDANCE WITH THE SWPPP.
2. FOR CONSTRUCTION OF THE LAYDOWN AREA, CONTRACTOR TO STRIP AND REMOVE THE TOPSOIL, INSTALL FABRIC AND STONE SECTION.
3. LAYDOWN AREA SHALL NOT BE CONSTRUCTED WITHIN WETLAND AREAS.
4. FUELING OPERATIONS WITHIN 100 FEET OF ANY KNOWN WETLAND OR STREAM OR WITHIN 200 FEET OF ANY POTABLE WATER SOURCE SHOULD BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. IN SITUATIONS WHERE THIS IS UNAVOIDABLE, REFUELING SHALL TAKE PLACE IN ACCORDANCE WITH THE EM&CP SECTION 5.5.
5. AT THE COMPLETION OF CONSTRUCTION, CONTRACTOR TO REMOVE STONE, FABRIC AND RESTORE TO EXISTING CONDITIONS IN ACCORDANCE WITH THE RESTORATION SECTION FOR AGRICULTURAL LANDS AS IDENTIFIED WITHIN THE EM&CP.

KINGSBURY SHOW UP YARD
SCALE: 1" = 50'



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

0	03/22/2023	ISSUED FOR CONSTRUCTION SUBMISSION	JJE	JPR
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY
KINGSBURY SHOW UP YARD

DRAWN BY: JJE DESIGNED BY: JTM APPROVED BY: JPR SCALE AS NOTED
REV. NO. X

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-201
DATE	03/22/2023