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January 20, 2023

Mr. Berel Karniol, CEO
Trodale Developers, Inc.
One Executive Blvd., Suite 101
Suffern, NY 10901

RE: Wetland letter report for Chester Industrial Park parcel
Parcel: S/B/L 116-1-1.2
Town of Chester
Orange County, NY

Dear Mr. Karinol,

On April 7, 2023, a wetland delineation was conducted as requested on the above referenced parcel, a property of approximately 37 acres. The site was walked and a field investigation completed to determine if there were any areas in question that met any of the definitions of regulated wetland areas by either the Army Corps of Engineers (ACOE) or the New York State Department of Environmental Conservation (NYSDEC).

Before conducting the field investigation, we reviewed online Federal and State aerial, soils, and remote wetland mappings of the referenced parcel. These sources assist in identifying if there are any remotely mapped wetlands on the property as well as any other areas where we should verify whether or not the field conditions match the mapped resources that we reviewed.

The online NYSDEC remote wetlands mapper resource shows a state regulated wetland is remotely mapped across the eastern portion of the property. This wetland (NYSDEC Freshwater Wetland WR-8) is shown on the attached NYSDEC Environmental Resource Mapper figure as being present on either side of Route 17, connected by culverts. As also depicted on the attached figure, all NYSDEC wetlands are bordered by a NYSDEC regulated 500-foot state checkzone¹. An excavated portion of a stream that aligns with the boundary lines of several properties within the industrial park forms a border along the southeastern portion of this property. It is an un-protected (Class C) stream (NYSDEC Regulation No. 862-195) which, beyond Chester, drains into the Otter Kill, a tributary to Moodna Creek and ultimately to the Hudson River.

¹ The "checkzone" is an area around a mapped NYSDEC wetland within which the actual wetland may occur. A project that may encroach into this area should have the actual wetland boundary determined on site. A validated field delineation aids in avoiding impacts in NYSDEC wetlands or their regulated 100-foot buffer zones.

The field investigation was conducted in accordance to the 2012 Northcentral and Northeast Regional Supplement to the ACOE 1987 manual². The upland and wetland areas on the property were determined by observing three parameters: plant species, soil types, and site hydrology, in accordance with that agency's guidelines. Any areas appearing to meet the conditions set forth by the guidelines were flagged and then marked on a wetland field map which shows approximately those areas of the property within which we observed wetland conditions. A copy of this topological map of the flagged wetland lines on the property has been previously emailed to your surveyor contractor. That map was used to aid in the surveying of the actual location of the flagged wetland line. The surveyed wetland boundary line was field-verified and validated by the NYSDEC on 22 December, 2022.

During our field investigation, we noted that the wetland area that we flagged is characterized by fields of several forms of persistent emergent vegetation. The majority of the wetland area was dominated by a continuous, dense stand of common reed (phragmites). Around the edges of this stand of phragmites are fields of reed canarygrass and various forbs. This wetland area is assigned a USFWS Cowardin classification³ of PEM1Ed. These wetland classification code indicates areas of palustrine emergent vegetation (PEM), that is persistently evident in all seasons (1), and have seasonally flooded or saturated soils (E) which have been partly drained or ditched (d). This descriptor is applicable to all areas within the surveyed NYSDEC wetland area on this property.

A set of ACOE-compliant data forms (WetForms) were created to characterize both an upland and a wetland plot within the property. These two sets of forms are attached to this letter. The WetForm generated for the wetland plot is representative of a portion of Wetland "A," dominated by common reed and reed canarygrass. The WetForm generated for the upland plot is representative of the elevated, western portion of the site where shale has been spread.

Vegetation

Wetland "A" is the single wetland area located on site and is present largely as a graminoid field, dominated by several species of reedy grasses. It comprises 16.5 acres of the property, approximately 45% of the total property acreage. Several long-established and overgrown linear drainage ditches crisscross this portion of the property. The ground layer vegetation of grasses and forbs that were observed in the wetland area consisted primarily of common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), slender mountain mint (*Pycnanthemum tenuifolium*), flat-top goldenrod (*Euthamia graminifolia*), and woolgrass (*Scirpus cyperinus*). This vegetation is consistent with plants that are recognized as facultative to obligate wetland grasses and forbs.

The only treed upland areas of the property consist of sparse "hedgerows" of trees that are present around the property boundaries - largely restricted to the hillside abutting Route 94 to the northwest and to the elevated banks of the excavated stream that forms the southeast borders of the property. Along Route 94, eastern red cedar, eastern white pine, tree-of-heaven, and red maple are present within a narrow band along the roadway corridor. Along the stream, hawthorns and eastern red cedar are the primary trees found in the narrow band of trees present along the streambanks. Small areas of brushy thickets that are located sporadically across the site are formed of multiflora rose, Allegheny blackberry, or bush honeysuckles. The greatest expanse of upland terrain has been formed of a layer of crushed shale spread across the elevated, western portion of the site. Vegetation in this field is typically sparse, patchily present within larger areas of exposed shale rubble. A variety of grasses, sedges, and forbs are present, including orchard grass (*Dactylis glomerata*), green foxtail (*Setaria viridis*), soft rush (*Juncus effusus*), many-flowered aster (*Symphyotrichum ericoides*), and lateflowering thoroughwort (*Eupatorium serotinum*).

² ACOE, 1987, Corps of Engineers Wetlands Delineation Manual, 11 Technical Report Y-87-1.

³ Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Soils

Both the Orange County Soil Survey and the United States Department of Agriculture (USDA) online web soil survey from the Natural Resources Conservation Service (NRCS)⁴ were reviewed to verify if there were any potential hydric (wetland) soils on property. A copy of the USDA/NRCS Soil Survey map for the property is included for your use. The mapped soil units for these parcels included several non-hydric (upland) and one potentially hydric soil rating as shown on the attached soil survey map for this property. There are five upland soils mapped on the site. These are in locations that are mapped as either Bath-Nassau channery silt loams (BnB and BnC), Otisville gravelly silt loam (OtC), or Riverhead sandy loams (RhB and RhC). These soils were present in the western portion of the site. Across the eastern portion of the site, one potentially hydric soil (Madalin silt loam, Ma) is shown on the Soil Survey map.

Madalin soils were formed within sediments deposited in glacial ponds and lakes. They formed as deep and poorly to very poorly drained soils on level plains and ancient flooded basins. The several soil samples taken by hand auguring within the wetland area showed poorly drained, saturated soils. The soil cores taken in the wetland area during the field investigation were consistent with several field indicators of hydric soils as shown by example on the attached set of Wetland "A" WetForm datasheets, and therefore the areas flagged are considered to have wetland soils.

Upland (dryland) soils on the property that are mapped by the USDA/NRCS Soil Survey as the parent soils, are presently overlain by channery, gravelly deposits that have been spread and leveled across this portion of the site.

Hydrology

As required by the 2012 Northcentral and Northeast Regional Supplement to the ACOE 1987 manual, the hydrology of the property was considered when defining the approximate limits of any potential wetland areas. The areas identified as wetland were observed with surface soils that were either seasonally saturated or flooded throughout their areal extent during our several site visits. Surface water was often present within the several drainage ditches included through the wetland area of the site, and was perennially present in the mapped stream that runs along the site's southeastern boundary. For all other portions of the wetland, which are perched at elevations slightly above the ditches and the stream, direct input of rainfall would be a significant contributor to the hydrology on a seasonal basis. Other input of water to the site wetland would come from groundwater seepage from adjacent higher terrains to the west and north.

Conclusions

Based on the several sources of online federal and state agency materials that were reviewed, and the direct observations made by EA during the site visits, this site contains jurisdictional waters of the United States as determined by the presence of wetlands identified by the occurrence of hydrophytic vegetation, hydric soils and wetland hydrology according to the three-parameter criterion established in the 1987 "Corps of Engineers Wetlands Delineation Manual." The site wetland (Wetland "A") is adjacent to, and connected to, a defined water body (the onsite stream) that is part of an extensive WOTUS riverine system (the Hudson River).

Wetlands and streams such as these that are hydrologically connected to navigable waterways (an element of WOTUS) are subject to the regulatory jurisdiction of the ACOE per the provisions of Section 404 of the Clean Water Act. Prior to any disturbance of any portion of these wetland or stream areas therefore, a disturbance permit, or permits, would be required from the New York City office of the ACOE.

⁴ Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: <http://websoilsurvey.sc.egov.usda.gov/>. Accessed [April 19, 2022].

The wetland area of this property is also within the jurisdiction of the NYSDEC. The boundary of Wetland "A" has been validated during an on-site visit by the NYSDEC to accurately delineate the western boundary of Freshwater Wetland WR-8. Prior to any disturbance of any portion of this wetland area, or within its 100' buffer zone, a disturbance permit, or permits, would be required from the Region 3 Office of the NYSDEC in New Paltz.

Ecological Analysis is grateful to have had this opportunity to be of service to you in evaluating this property. Feel free to call if you have any questions or if we can be of further assistance.

Sincerely yours,

/s/ *Bruce R. Friedmann*

Bruce R. Friedmann
Senior Environmental Scientist
Ecological Analysis, LLC

Attachments:

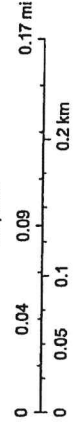
NYSDEC Environmental Resource wetlands map for property locale
USDA/NRCS Web Soil Survey map for property locale
ACOE WetForm for Wetland "A" plot
ACOE WetForm for UPLAND plot

Chester NY SBL: 116-1-1.2






April 19, 2022

1:4,514

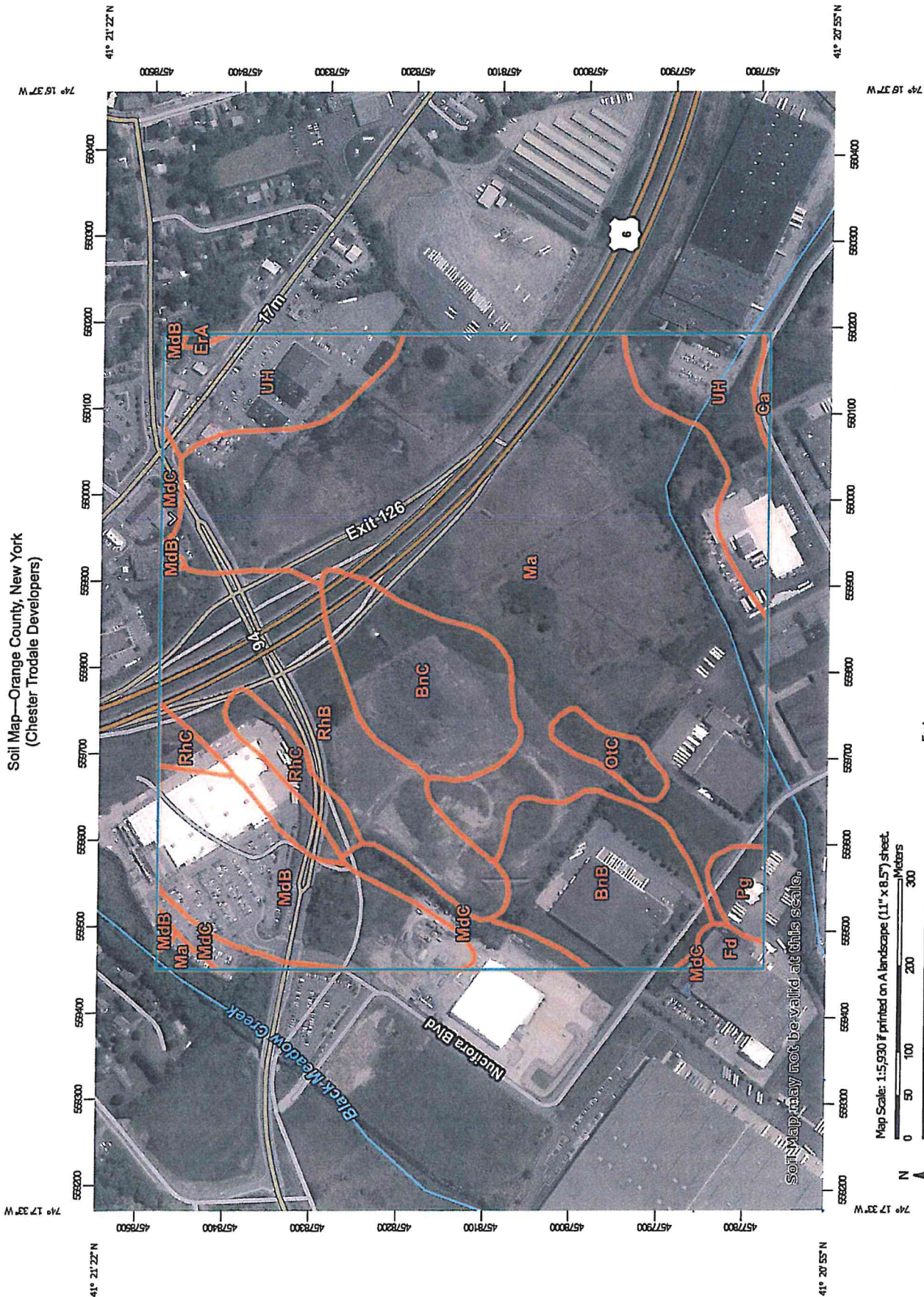


Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 NYS ITS GIS Program Office, Westchester County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors

Author: NYSDEC Environmental Resource Mapper
 Not a legal document

-  Project Site
-  State Regulated Freshwater Wetlands
-  State Regulated 500' Wetland Checkzone

Soil Map—Orange County, New York
(Chester Troadale Developers)



Map Scale: 1:5,930 If printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Soil Map may not be valid at this scale.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BnB	Bath-Nassau channery silt loams, 3 to 8 percent slopes	9.6	7.5%
BnC	Bath-Nassau channery silt loams, 8 to 15 percent slopes	8.8	6.9%
Ca	Canandaigua silt loam	0.4	0.3%
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	0.1	0.1%
Fd	Fredon loam	0.8	0.6%
Ma	Madalín silt loam	58.1	45.4%
MdB	Mardin gravelly silt loam, 3 to 8 percent slopes	11.7	9.1%
MdC	Mardin gravelly silt loam, 8 to 15 percent slopes	4.3	3.4%
OtC	Otisville gravelly sandy loam, 8 to 15 percent slopes	1.5	1.2%
Pg	Pits, gravel	1.4	1.1%
RhB	Riverhead sandy loam, 3 to 8 percent slopes	15.8	12.3%
RhC	Riverhead sandy loam, 8 to 15 percent slopes	2.9	2.3%
UH	Udorthents, smoothed	12.6	9.8%
Totals for Area of Interest		127.9	100.0%

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 94 Chester Industrial Park City/County: Chester, Orange County Sampling Date: 12-Oct-22
Applicant/Owner: Trodale Developers, Inc. State: NY Sampling Point: Wetland A
Investigator(s): Bruce Friedmann Section, Township, Range: S. 116 T. 1 R. 1.2
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR R Lat.: 41.35079 Long.: -74.28334 Datum: WGS 84
Soil Map Unit Name: Madalin silt loam (Ma) NWI classification: PEM1Ed

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

Hydrology

Wetland Hydrology Indicators:		Secondary Indicators (minimum of 2 required)	
Primary Indicators (minimum of one required; check all that apply)			
<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 checked="" type="checkbox"/> Oxidized Rhizospheres along 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 checked="" type="checkbox"/> FAC-neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (Inches): _____		
Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (Inches): <u>8</u>		
Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (Inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION - Use scientific names of plants

Sampling Point: Wetland A

Tree Stratum	Plot size: 30	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
		0	= Total Cover	

Sapling/Shrub Stratum	Plot size: 10	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
		0	= Total Cover	

Herb Stratum	Plot size: 5	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <i>Phragmites australis</i>		75	<input checked="" type="checkbox"/> 63.6%	FACW
2. <i>Phalaris arundinacea</i>		25	<input checked="" type="checkbox"/> 21.2%	FACW
3. <i>Pycnanthemum tenuifolium</i>		5	<input type="checkbox"/> 4.2%	FAC
4. <i>Euthamia graminifolia</i>		5	<input type="checkbox"/> 4.2%	FAC
5. <i>Scirpus cyperinus</i>		5	<input type="checkbox"/> 4.2%	OBL
6. <i>Agrimonia gryposepala</i>		1	<input type="checkbox"/> 0.8%	FACU
7. <i>Scirpus atrovirens</i>		1	<input type="checkbox"/> 0.8%	OBL
8. <i>Achillea millefolium</i>		1	<input type="checkbox"/> 0.8%	FACU
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
		118	= Total Cover	

Woody Vine Stratum	Plot size: 5	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
		0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species	<u>6</u>	x 1 =	<u>6</u>
FACW species	<u>100</u>	x 2 =	<u>200</u>
FAC species	<u>10</u>	x 3 =	<u>30</u>
FACU species	<u>2</u>	x 4 =	<u>8</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>118</u>	(A)	<u>244</u> (B)

Prevalence Index = B/A = 2.068

Hydrophytic Vegetation Indicators:

☒ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators 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 3.28 ft (1m) tall.

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

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FW

Sampling Point: Wetland A

[illegible]

Hydric Soil Indicators:

- ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ☐ Loamy Mucky Mineral (F1) LRR K, L)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

- ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ☐ Coast Prairie Redox (A16) (LRR K, L, R)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ☐ Dark Surface (S7) (LRR K, L, M)
- ☐ Polyvalue Below Surface (S8) (LRR K, L)
- ☐ Thin Dark Surface (S9) (LRR K, L)
- ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Plot ID: **Wetland A**

Photo Path: \\EA-SERVER\Company\437.02722 Route 94 Chester Trodale Zel



Photo File: **DSCN9298.JPG** Orientation: South -facing

Lat/Long or UTM: Long/Easting: **-74.28334** Lat/Northing: **41.35079**

Description: Reed canarygrass field along phragmites stand.



Photo File: **DSCN9299.JPG** Orientation: North -facing

Lat/Long or UTM: Long/Easting: **-74.28334** Lat/Northing: **41.35079**

Description: Reed canarygrass field along phragmites stand.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 94 Chester Industrial Park

City/County: Chester, Orange County

Sampling Date: 12-Oct-22

Applicant/Owner: Trodale Developers, Inc.

State: NY

Sampling Point:

Upland

Investigator(s): Bruce Friedmann

Section, Township, Range: S. 116

T. 1

R. 1.2

Landform (hillslope, terrace, etc.): Flat

Local relief (concave, convex, none): flat

Slope: 0.0 % / 0.0

Subregion (LRR or MLRA): LRR R

Lat: 41.35209

Long.: -74.28658

Datum: WGS 84

Soil Map Unit Name: Uh - Udorthents, smoothed

NWI classification: Upland

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ 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, et

Hydrophytic Vegetation Present? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒
Wetland Hydrology Present? Yes ☐ No ☒

Is the Sampled Area within a Wetland? Yes ☐ No ☒

Remarks: (Explain alternative procedures here or in a separate report.)

Upland areas of the site are present primarily as areas of spread and leveled shale fragments of indeterminate depth to native soils.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ☐ 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 ☒

Depth (inches): _____

Water Table Present? Yes ☐ No ☒

Depth (inches): _____

Saturation Present? (Includes capillary fringe) Yes ☐ No ☒

Depth (inches): _____

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: Upland

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
= Total Cover			

Sapling/Shrub Stratum (Plot size: 10)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
= Total Cover			

Herb Stratum (Plot size: 5)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <i>Dactylis glomerata</i>	30	<input checked="" type="checkbox"/> 52.6%	FACU
2. <i>Setaria viridis</i>	10	<input type="checkbox"/> 17.5%	UPL
3. <i>Juncus effusus</i>	5	<input type="checkbox"/> 8.8%	OBL
4. <i>Symphoricarpon ericoides</i>	5	<input type="checkbox"/> 8.8%	FACU
5. <i>Eupatorium serotinum</i>	5	<input type="checkbox"/> 8.8%	FAC
6. <i>Asclepias syriaca</i>	1	<input type="checkbox"/> 1.8%	UPL
7. <i>Nepeta cataria</i>	1	<input type="checkbox"/> 1.8%	FACU
8. _____	0	<input type="checkbox"/> 0.0%	
9. _____	0	<input type="checkbox"/> 0.0%	
10. _____	0	<input type="checkbox"/> 0.0%	
11. _____	0	<input type="checkbox"/> 0.0%	
12. _____	0	<input type="checkbox"/> 0.0%	
= Total Cover			

Woody Vine Stratum (Plot size: 5)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
= Total Cover			

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>36</u>	x 4 = <u>144</u>
UPL species <u>11</u>	x 5 = <u>55</u>
Column Totals: <u>57</u> (A)	<u>219</u> (B)

Prevalence Index = B/A = 3.842

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☐ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators 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 3.28 ft (1m) tall.

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

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FW

Sampling Point: Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Indicators for Problematic Hydric Soils : ³

- Indicators for Problematic Hydric Soils:**

 - ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck Mineral (S1)
 - ☐ Sandy Gleyed Matrix (S4)
 - ☐ Sandy Redox (S5)
 - ☐ Stripped Matrix (S6)
 - ☐ Dark Surface (S7) (LRR R, MLRA 149B)
 - ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - ☐ Loamy Mucky Mineral (F1) LRR K, L
 - ☐ Loamy Gleyed Matrix (F2)
 - ☐ Depleted Matrix (F3)
 - ☐ Redox Dark Surface (F6)
 - ☐ Depleted Dark Surface (F7)
 - ☐ Redox Depressions (F8)
 - ☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - ☐ Coast Prairie Redox (A16) (LRR K, L, R)
 - ☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
 - ☐ Dark Surface (S7) (LRR K, L, M)
 - ☐ Polyvalue Below Surface (S8) (LRR K, L)
 - ☐ Thin Dark Surface (S9) (LRR K, L)
 - ☐ Iron-Manganese Masses (F12) (LRR K, L, R)
 - ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
 - ☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - ☐ Red Parent Material (F21)
 - ☐ Very Shallow Dark Surface (TF12)
 - ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Hydric Soil Present? Yes ☐ No ☒

Type: _____

Depth (Inches): _____

Remarks:

No soil profile was observable as the upland areas of the site are present primarily as areas of spread and leveled shale fragments of indeterminate depth to native soils. Deposits not penetrable by hand augur.

Plot ID: **Upland**

Photo Path: \\EA-SERVER\Company\437.02722 Route 94 Chester Trodale Zei



Photo File: **DSCN9281.JP**

Orientation:

North -facing

Lat/Long or UTM: Long/Easting: **-74.28658**

Lat/Northing: **41.35209**

Description:



Photo File: **DSCN9282.JPG**

Orientation:

West -facing

Lat/Long or UTM: Long/Easting: **-74.28658**

Lat/Northing: **41.35209**

Description: