



- Soil & Wetland Studies
- Ecology • Application Reviews
- Listed Species Surveys • GPS
- Environmental Planning & Management
- Ecological Restoration & Habitat Mitigation
- Expert Testimony • Permitting

October 14, 2022

VIA E-MAIL

Mr. Kenneth Hrica, P.E., L.S.  
Hrica Associates, LLC  
82 West Street  
Litchfield, CT 06759

**Re: WETLANDS INVESTIGATION – SUMMARY OF FINDINGS**  
Haynes Materials, Winsted Road, Torrington, CT

*REMA Job No.: 22-2519-TOR8*

Dear Ken:

At your request, on July 11<sup>th</sup>, 2022, and again on October 5<sup>th</sup>, 2022, REMA ECOLOGICAL SERVICES, LLC (REMA), visited a wetland area associated with the northerly flowing Still River riparian corridor, which has received a deposition of very fine stone dust tailings via a cross-culvert from the rock quarry operation at the Haynes Materials site, on Winsted Road, Torrington. The primary objective of our field investigation was to ascertain as to whether the aforementioned deposition has resulted in a significant and adverse impact to the regulated wetland, and to recommend any remedial activities for restoration, as deemed appropriate and necessary.

The study area encompasses roughly 0.5 acres immediately to the east of the rails to trails linear park, located just east of Winsted Road (see attached USDA-NRCS Web Soil Survey). It is within a property owned by AVI Land Development, LLC, at 3240 Winsted Road. The entire study area is characterized as a regulated wetland area, and its western boundary was delineated (Survey Flags RES-A-1 to RES-A-6) (see Figure A, attached).



The regulated wetland associated with the study area is a mosaic of emergent (i.e., marsh/wet meadow) and scrub shrub wetland cover types. The soils in the area, including the area of deposition, are very deep (i.e., >51”) mucks of the Catden and Freetown (18) soil series complex. These are very poorly drained soils.

As part of our overall investigation of the area of rock dust tailings deposition, we established five (5) plots, where we measured the depth of deposition and catalogued dominant and common plant species (woody and herbaceous) within a 10 foot radius (see Table 1, attached). Four of these plots (i.e., TH-1 to TH-4) were within the affected area, while one (i.e., TH-5) was a few feet beyond the limit of any perceptible deposition (also see Photos 1 through 15, attached). The approximate locations of the plots were “plotted” via a hand-held GPS (accuracy +/- 11 feet) and are shown on Figures B through F (attached).

In all cases the surface of the ground at the five plots was saturated, and surprisingly, the difference in elevation between Plot #4 (with 7” of sediment) and Plot #5 was imperceptible. We surmise by this, and by the surface saturation at all the plots, that the “weight” of the deposited sediment on saturated, soft mucks has displaced or depressed the organics and has reached an equilibrium elevation which is relatively level throughout the study area, and likely is at or very close to the “pre-disturbance” elevations.

Moreover, the vegetation composition, as can be seen in Table 1 is dominated by plants that are always or almost always found in the wettest of wetland habitats (i.e., NWI indicators of OBL and FACW), which correlates well with a “saturated” (i.e., year round) wetland hydrologic regime. The difference in dominant and common plant species between Plot #5 and all the other plots is not significant, and the presence of only one common invasive species (i.e., purple loosestrife) in all the plots, also shows that the “disturbance” has not resulted in an invasion of other invasive species. This is mostly attributable to the fact that the hydrologic regime of the affected area remains “saturated.”

We conclude that, fortunately, the deposition of fine stone dust tailings has not resulted in an adverse impact upon the wetland plant community, although it probably has affected the invertebrate community that relies on the organic soils. Nevertheless, most all of the typical functions and values that the affected wetland area conferred in the past, are still present under existing conditions.



For the above-stated reasons, and based on our field investigations, we do not believe it to be prudent that any deposited sediment be removed, but that measures be taken so that no more sediment deposition takes place. The only recommendation we would make is that the source of the tailings be remediated, so that it does not continue affecting this area in the future. It is our understanding that this has already taken place.

Please feel free to contact us if you have any questions.

Respectfully submitted,

**REMA ECOLOGICAL SERVICES, LLC**

A handwritten signature in black ink, which appears to read "George T. Logan". The signature is fluid and cursive, with a horizontal line extending to the right.

George T. Logan, MS, PWS, CSE  
Certified Professional Wetland Scientist  
Registered Soil Scientist, Certified Senior Ecologist

Attachments:   USDA-NRCS Web Soil Survey  
                      Figures A through G  
                      Photos 1 to 15  
                      Table 1

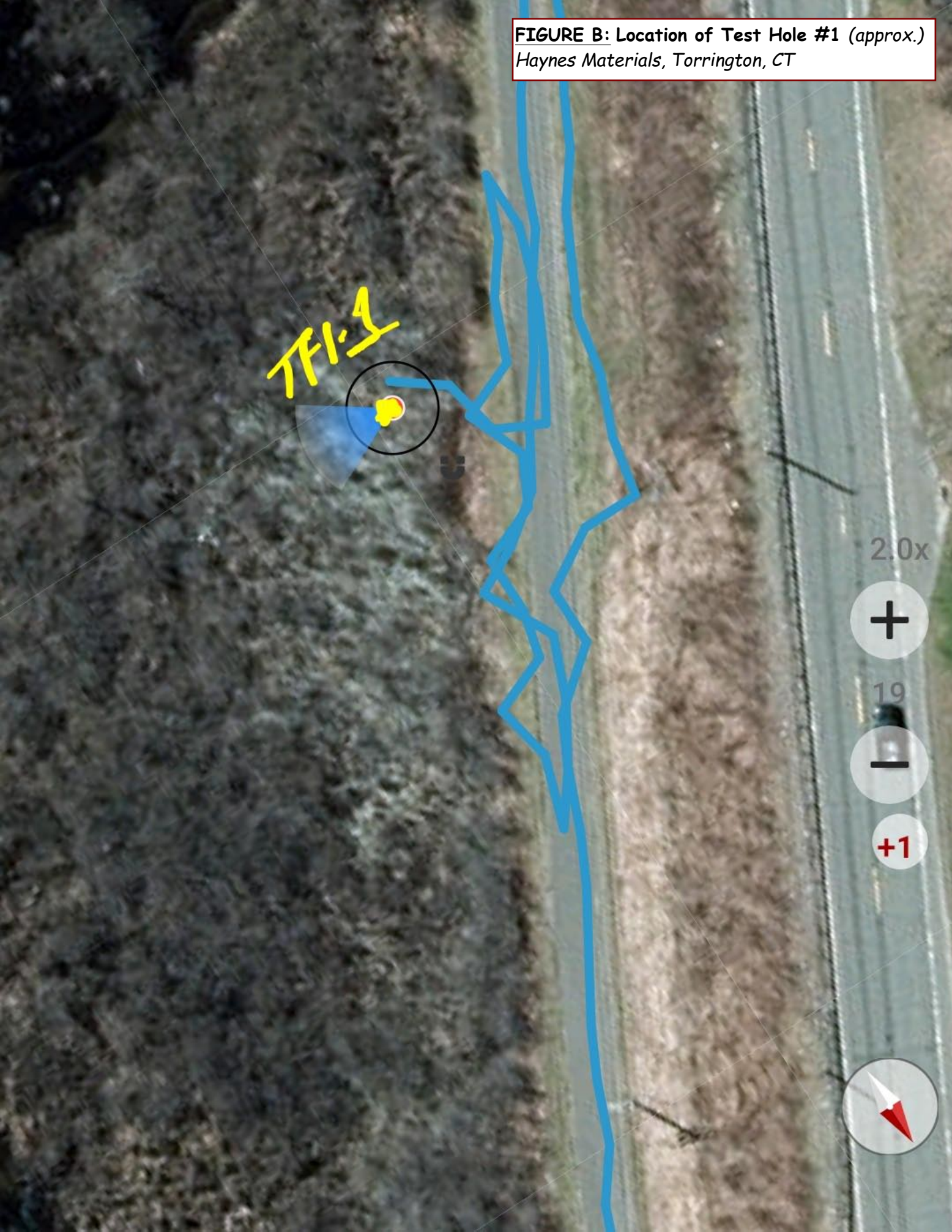


**FIGURE A: Wetland Delineation Sketch Map**  
*Haynes Materials, Torrington, CT*  
(showing limit of affected wetland area per  
photographic signature)





**FIGURE B: Location of Test Hole #1 (approx.)**  
*Haynes Materials, Torrington, CT*





**FIGURE C: Location of Test Hole #2 (approx.)**  
*Haynes Materials, Torrington, CT*

1H-2



2.0x



19

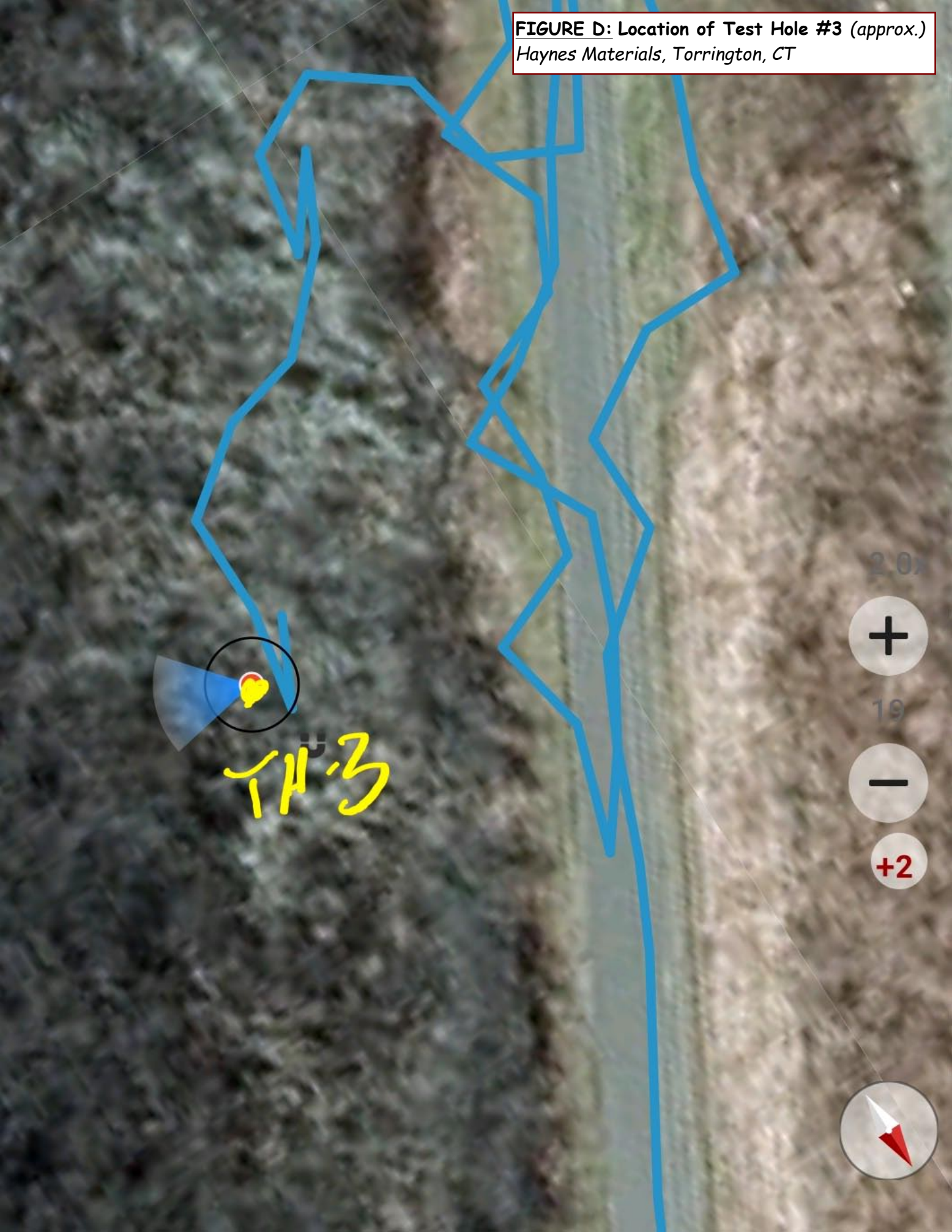


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**FIGURE D: Location of Test Hole #3 (approx.)**  
*Haynes Materials, Torrington, CT*



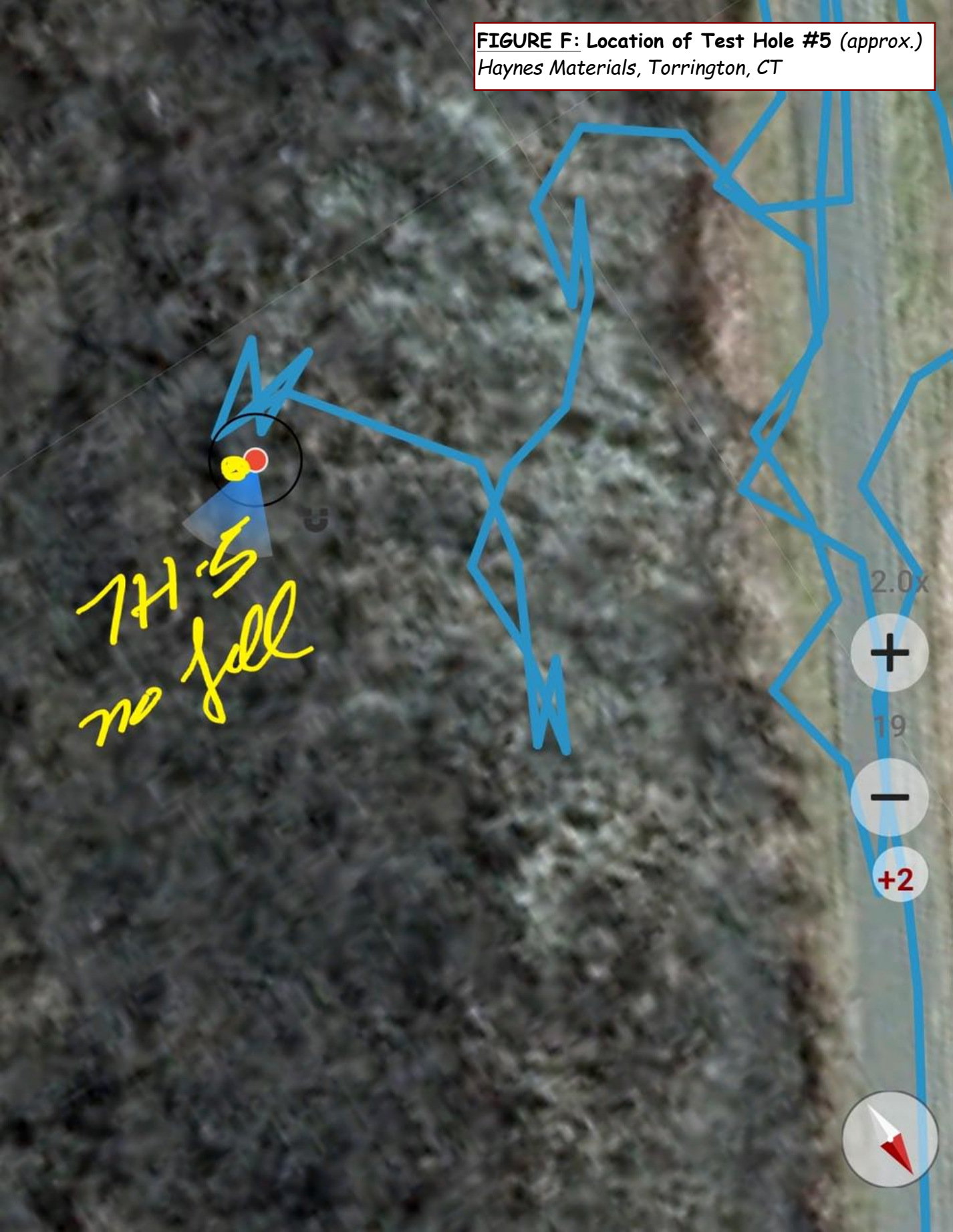
TH-3



**FIGURE E: Location of Test Hole #4 (approx.)**  
*Haynes Materials, Torrington, CT*



**FIGURE F: Location of Test Hole #5 (approx.)**  
*Haynes Materials, Torrington, CT*



7/21/15  
no fall

2.0x

+

19

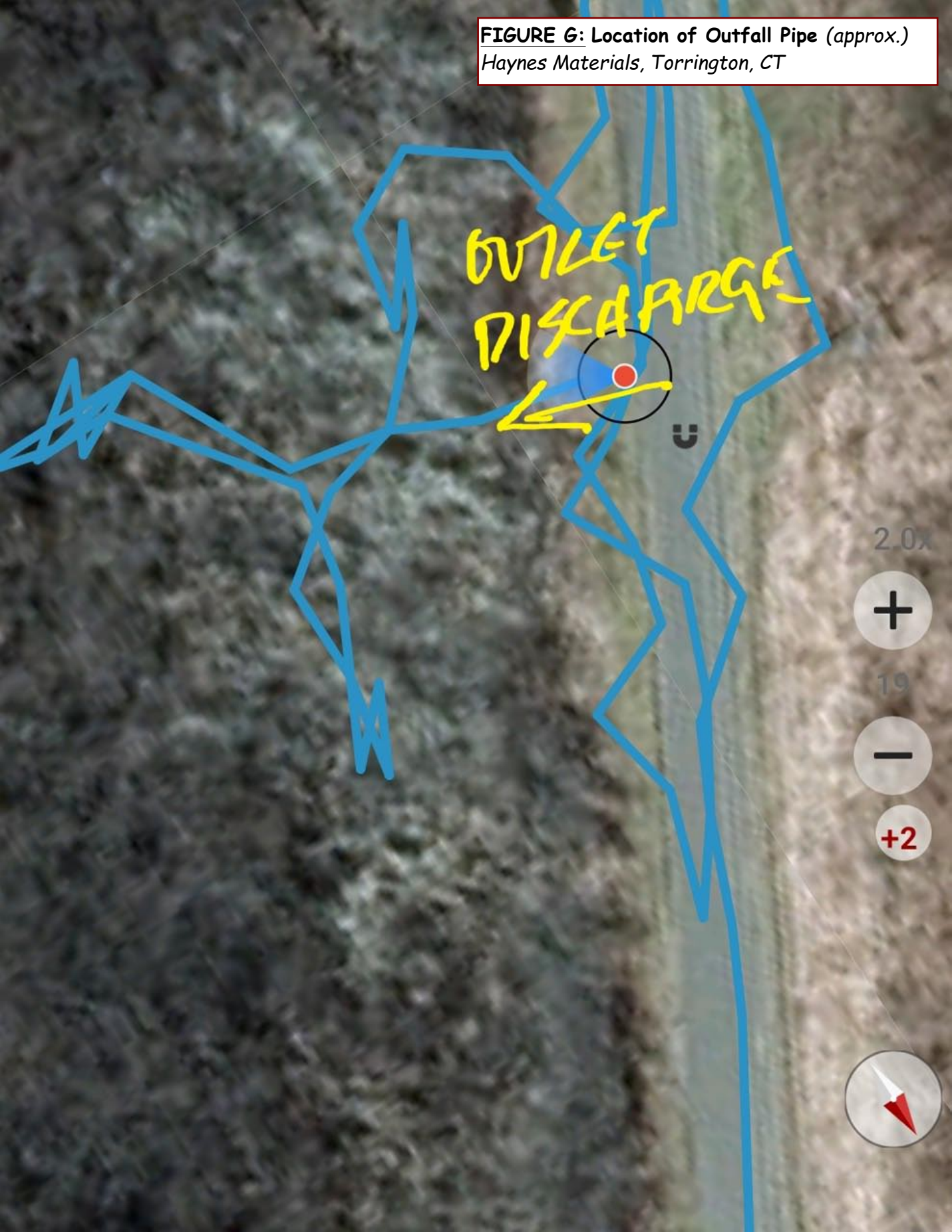
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**FIGURE 6:** Location of Outfall Pipe (approx.)  
*Haynes Materials, Torrington, CT*





Haynes Materials, Torrington, CT  
Photos taken July 2022



*Photo 1:* Wetlands (to left; east), associated with northerly flowing Still River, along a roughly 250-foot portion of the “rails to trails” linear park; facing southwesterly



*Photo 2:* Mostly filled-in culvert under Winsted Road and linear park, that has brought very fine stone dust tailings to riparian wetland; facing westerly





*Photo 3: Test Hole & Plot #1; facing northerly*



*Photo 4: Sediment deposition above original deep organics (muck) soils was measured at each test hole (here Test Hole #1)*





*Photo 5:* Test Hole & Plot #2; facing northerly



*Photo 6:* Sediment deposition above original deep organics (muck) soils was measured at each test hole (here Test Hole #2)





*Photo 7: Test Hole & Plot #3; facing westerly*



*Photo 8: Test Hole & Plot #4; facing westerly*





*Photo 9: Test Hole & Plot #5; facing northeasterly*



*Photo 10: Intermittent stream channel roughly 12 feet to the east of Plot #5; facing southeasterly*





*Photo 11: Still River riparian wetland corridor north (downriver) of the study area; facing southerly*



Haynes Materials, Torrington, CT  
Photos taken October 4<sup>th</sup>, 2022



*Photo 12:* Overall view of affected area; robust and diverse emergent vegetation throughout; facing southeasterly



*Photo 13:* Test Hole and Plot #1; facing northwesterly





*Photo 14: Test Hole & Plot #2; wool grass (*Scirpus cyperinus*) is now dominant; facing southerly*



*Photo 15: Still River riparian wetland downstream of study area; facing southeasterly*



**TABLE 1: Dominant/Common Plant Species of Wetland Community at each of five Soil Test Holes and Plots, Haynes Materials, Torrington, CT**

<b>Common Name</b>	<b>Scientific Name</b>	<b>NWI Status</b>	<b>Test Hole #1 Plot</b>	<b>Test Hole #2 Plot</b>	<b>Test Hole #3 Plot</b>	<b>Test Hole #4 Plot</b>	<b>Test Hole #5 Plot</b>
Pussy willow	<i>Salix discolor</i>	FACW	X	X	X	X	
Glossy buckthron	<i>Frangula alnus</i>	FAC	X	X	X	X	X
Speckled alder	<i>Alnus incana</i>	FACW+	X		X	X	X
Swamp rose	<i>Rosa palustris</i>	OBL	X	X	X		
Meadowsweet	<i>Spirea latifolia</i>	FAC+	X				
Red maple	<i>Acer rubrum</i>	FAC			X		
Silky dogwood	<i>Swida amomum</i>	FACW					X
Golden saxifrage	<i>Chrysosplenium americanum</i>	OBL	X				
Tussock sedge	<i>Carex stricta</i>	OBL	X		X		
Jewelweed	<i>Impatiens capensis</i>	FACW	X	X	X		X
Purple loosestrife	<i>Lythrum salicaria</i>	OBL	X	X	X	X	X
Tall meadow rue	<i>Thalictrum pubescens</i>	FACW	X				
New York fern	<i>Parathelypteris noveboracensis</i>	FAC	X				
Roughstem goldenrod	<i>Solidago rugosa</i>	FAC	X				X
Tall goldenrod	<i>Solidago altissima</i>	FACU	X				
Halberd tearthumb	<i>Persicaria arifolia</i>	OBL	X			X	X
Soft rush	<i>Juncus effusus</i>	OBL		X			
Canada rush	<i>Juncus canadensis</i>	OBL		X		X	
Cattail	<i>Typha latifolia</i>	OBL		X			
Swamp candles	<i>Lysimachia terrestris</i>	OBL		X			



**Table 1: Dominant/Common Plant Species of Wetland Community at each of five Soil Test Holes and Plots (continued)**

<b>Common Name</b>	<b>Scientific Name</b>	<b>NWI Status</b>	<b>Test Hole #1 Plot</b>	<b>Test Hole #2 Plot</b>	<b>Test Hole #3 Plot</b>	<b>Test Hole #4 Plot</b>	<b>Test Hole #5 Plot</b>
Forget-me-not	<i>Myosotis scorpioides</i>	OBL			X	X	X
Three-way sedge	<i>Dulichium arundinaceum</i>	OBL			X		
American burreed	<i>Sparganium americanum</i>	OBL				X	
Seedbox	<i>Ludwigia alternifolia</i>	OBL				X	
Devil's Beggars ticks	<i>Bidens frondosa</i>	FACW				X	
Thicket bindweed	<i>Fallopia dumetorum</i>	FAC				X	X
Marsh Fern	<i>Thelypteris palustris</i>	FACW			X		
Sensitive fern	<i>Onoclea sensibilis</i>	FACW				X	X
Water plantain	<i>Alisma plantago-aquatica</i>	OBL					X

**NWI Status**

(Wetland indicators)

FACU = Usually occurs in non-wetlands, but occasionally in wetlands.

FAC = Occurs in wetlands or non-wetlands.

FACW = Usually occurs in wetlands, but occasionally in non-wetlands.

OBL = Occurs only in wetlands.

**NOTES:**

Test Hole #1 = 9" sediment; saturated to surface

Test Hole #2 = 18" sediment; saturated to surface

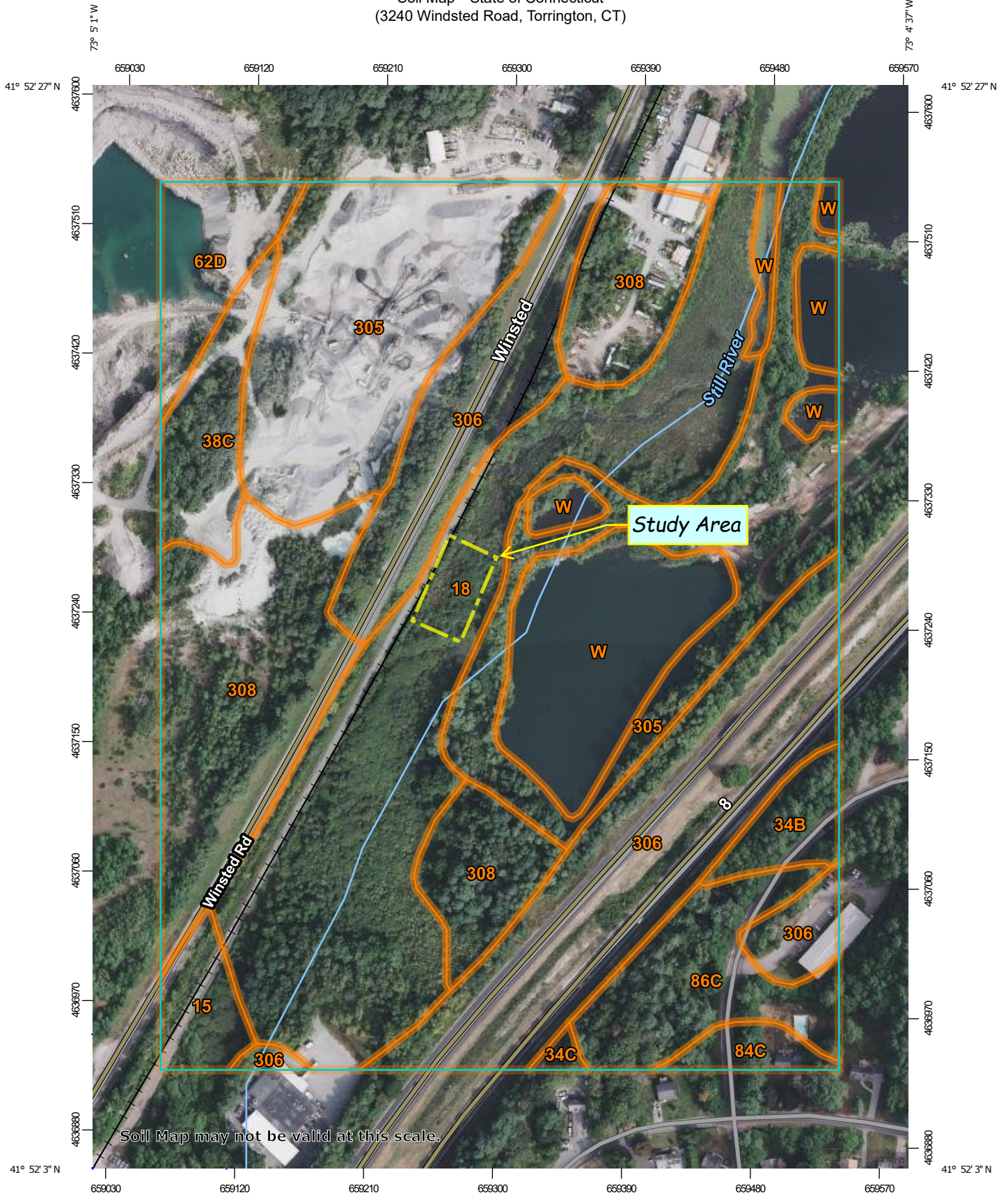
Test Hole #3 = 20" sediment over 22"+ muck; saturated to surface

Test Hole #4 = 7" sediment; saturated to surface; near edge of sediment deposition

Test Hole #5 = 0" sediment; saturated to surface; within 12' of small (2' wide) watercourse



Soil Map—State of Connecticut  
(3240 Windsted Road, Torrington, CT)



Map Scale: 1:3,670 if printed on A portrait (8.5" x 11") sheet.



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



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

8/5/2022  
Page 1 of 3



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut  
Survey Area Data: Version 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2020—Sep 15, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
15	Scarboro muck, 0 to 3 percent slopes	1.2	1.7%
18	Catden and Freetown soils, 0 to 2 percent slopes	14.6	20.2%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	1.2	1.6%
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	0.2	0.2%
38C	Hinckley loamy sand, 3 to 15 percent slopes	2.2	3.0%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	2.1	2.9%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	0.7	1.0%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	3.5	4.9%
305	Udorthents-Pits complex, gravelly	15.0	20.7%
306	Udorthents-Urban land complex	13.9	19.2%
308	Udorthents, smoothed	11.4	15.7%
W	Water	6.5	9.0%
<b>Totals for Area of Interest</b>		<b>72.5</b>	<b>100.0%</b>