

## **ATTACHMENT C: Tables**

---

Tables 1 through 3

**Table 1. Analytical results and field observations for seven composite soil samples, collected on September 25, 2019, and analyzed by the UConn Soil Nutrient Analysis Laboratory, College of Agriculture (CAG), in Storrs, Connecticut. Samples were taken from five representative plots from an Eversource Transmission Line Corridor (TLC) in Glastonbury including a +/-1,110-foot segment owned by the Lanata & Therrien families, at 2042 and 2060 New London Turnpike, and the ~900 -foot long segment just to the northeast, owned by Eversource. Plot Locations are shown on Figure 1.**

<b>Sampling Location</b> (Shown on Fig. 1)	<i>Rep. Plot 1, North side of stone process entry road</i>	<i>Rep. Plot 3 in thin natural topsoil over bedrock (control plot; poles not yet replaced)</i>	<i>Rep. Plot 2 in Pad 3, thin topsoil over fill (stone process &amp; rocky subsoil)</i>	<i>Rep. Plot 4A in logged wetland (2018), west of Turnpike; seasonally saturated portion.</i>	<i>Rep. Plot 4B in logged wetland (2018), west of Turnpike; seasonally flooded portion.</i>	<i>Rep. Plot 4C in logged wetland, west of Turnpike; herbicide-treated portion.</i>	<i>Rep. Plot 5 in logged wetland west of Tpk; under 4" thick, wood chips.</i>	<b>Thresholds, &amp; usual CT ranges (ppm) per Uconn CAG Soil Nutrient Analysis Report 1/7/2020</b>
<b>Cover Type</b>	Shrub thicket	Mosaic of low shrubs & meadow	Tall Weeds & Bare Soil	Diverse wet meadow with some tree, seedlings & shrubs	Sparse emergent wetland with sedges	Sparse wetland with cudweed, tree seedlings	Sparse emergent wetland with cudweed	
<b>Lab Soil Sample ID:</b>	<b>TH 1B</b>	<b>TH 2</b>	<b>TH 3</b>	<b>TH 4A</b>	<b>TH 4B</b>	<b>TH4C</b>	<b>THL5</b>	
<b>Soil Sampling Date:</b>	9/23/2019	9/23/2019	9/23/2019	9/23/2019	9/23/2019	9/23/2019	9/23/2019	
<b>Percent Organic matter</b>	9.5	8.5	2.8	10.8	35.9	11.8	35.0	Threshold for optimum level for farm soils (approx):
<b>Cation Exchange Capacity</b>	14.5	12.7	6.8	6.1	17.8	12.4	17.9	
<b>pH</b>	4.3	4.4	5.6	5.0	4.0	4.6	4.0	
<b>Calcium (ppm)</b>	98.5	122.5	629.5	632.5	257.5	438.5	282.0	>850
<b>Magnesium (ppm)</b>	26.5	26.5	58.5	60.5	39.0	59.5	70.5	>90
<b>Phosphorus (ppm)</b>	2.5	2.0	4.5	2.0	1.5	2.0	2.5	>7
<b>Potassium (ppm)</b>	60.5	50.0	57.0	56.5	16.0	60.0	18.0	>80
<b>Boron (ppm)</b>	0.1	0.1	0.4	0.3	0.2	0.3	0.2	CT Range: 0.1-2 ppm
<b>Copper (ppm)</b>	0.2	0.2	0.5	0.2	0.1	0.2	0.1	CT Range: 0.3-0.8 ppm
<b>Iron (ppm)</b>	16.3	24.9	17.2	62.8	91.1	112.2	106.7	CT Range: 1-40 ppm
<b>Manganese (ppm)</b>	4.1	3.8	2.6	2.9	16.7	4.3	18.9	CT Range: 3-20 ppm
<b>Zinc (ppm)</b>	1.4	1.9	1.0	2.0	5.9	3.2	9.8	CT Range: 0.1-70 ppm
<b>Sulphur (ppm)</b>	27.1	15.1	38.2	50.4	20.9	40.0	22.6	CT Range: 0.13-70 ppm
<b>Est. Lead (ppm)</b>	86.1	79.6	74.5	209.7	80.8	201.2	82.7	low
<b>Aluminum (ppm)</b>	287.9	185.8	70.0	143.2	49.6	140.9	57.2	CT Range: 10-300 ppm
<b>Soil Series</b>	Charlton-Chatfield complex	Hollis-Chatfield Rock crop complex	Udorthent, graded	Leicester Series	Whitman Series	Leicester Series	Whitman Series	
<b>Soil Description : texture, depth of topsoil, color, mottles, percentage coarse fragments</b>	2" loose silt fine sandy loam, 8" of topsoil, (7.5 YR 3/3) over 2" very stony subsoil (7.5YR 6/3). To stony to dig further.	fine sandy loam, 0-2" 10YR 3/3; 2-8" 10YR 6/4 with no gravel; bedrock below 8" 5% cover of surface rocks	fine sandy loam, 1-2" topsoil over dense stone process	loam, 14" of v. dark topsoil, Chroma 2 predominates in matrix, from 14 to 20"	Black silty topsoil high in OM; gleyed & low chroma mottles (Chroma 1 & 2) below 12"	Loamy fine sand slightly moist, high root density, 2-3' dark brown A horizon, likely truncated during grading ca. 1965	Below the 4" wood chip layer, 4-5" black silt loam over dark gray silt loam (Chr 2) with chroma 1 mottles & dark red mottles	

**TABLE 2: THERRIEN-LANATA STUDY OF AN EVERSOURCE RIGHT-OF-WAY SEGMENT: COMPARISON OF ECOLOGICAL CONDITIONS UNDER SEVERAL MANAGEMENT REGIMES, #2042 & #2060 New London Turnpike, Glastonbury, Connecticut**

#'S OF PLOTS, SURVEY ROUTES, & PADS:	SOUTHWESTERN ROW SEGMENT Therrein & Lanata Properties, 2060 & 2042 New London Turnpike								NORTHEASTERN ROW SEGMENT Eversource Property, N. of New London Tpk													
	Center & South Side of ROW				North Side of ROW				North Side of ROW			Center & South Side of ROW										
	CENTRAL SOUTH PLOT 1	SOUTH EAST ROUTE	SE CONTROL Plot 3	SWPad#2 Plot 2	NE Pad#1	NWPad#4	SOUTH WEST ROUTE	BY RD Pad#3	Plot 4	Plot 5	NORTH WEST ROUTE	SOUTH ROUTE	NORTH EAST ROUTE	NORTH CENTRAL ROUTE								
<b>ROUTINE ROW VEGETATION MANAGEMENT REGIMES AND SPECIAL RIGHT-OF-WAY MAINTENANCE ACTIVITIES:</b>	SAPLINGS & INVASIVES CUT TO COMPLY; NO HERBICIDE USE. GRADING & GRAVELLING OF SERVICE ROAD IN 2015,		SAPLINGS & INVASIVES CUT TO COMPLY; NO HERBICIDE USE		2017 DENSE FILL ON 1/2 ACRE. 1-2" TOP-SOIL OVER PART OF PAD. SEEDED WITH CLOVER & GRASS; NOW MIXED WEEDS		2015 DENSE FILL ON 30,000 SF, 3" TOPSOIL SEEDING WITH CLOVER & GRASS; NOW MIXED WEEDS		2019 TIMBER MATTING, NO FILL PLACEMENT, SOME TOPSOIL		2014 LOGGING, 100' WIDE SWATH, NOT UNDER LINES, WOOD CHIP DEPOSITION IRREGULAR, MOSTLY LOW		2018 RECENT LOGGING, NATIVE LANDSCAPING BORDER, LAWN		2018 RECENT LOGGING, WOOD MODERATE, IRREGULAR CHIP DEPOSITION; LOCALIZED SELECTIVE HERBICIDE SPRAYING OF WOODY		2018 RECENT CLEAR-CUT LOGGING, 100' WIDE SWATH, NOT UNDER LINES, IRREGULAR CHIP DEPOSITION, LOCALLY VERY THICK (>4")		UPLAND SAPLINGS & INVASIVES HERBICIDED & CEDARS CUT TO COMPLY; LIMITED SHRUB CUTTING IN WETLANDS, POOR IDENTIFICATION		GRAVELLING OF SERVICE ROAD WITH MINIMAL GRADING; ONLY 12-13' WIDE	
<b>SUMMARY OF MAINTENANCE ACTIVITIES:</b>	GRAVELLED RD		CONTROL		POLE REPLACEMENT TIMBER PAD-BUILDING MATS		NORTH SIDE LOGGING, IRREGULAR CHIPS NO CHIPS		LOGGING, THICK CHIPS		HERBICIDE/CUT		HERBIC./CT GRAVEL RD									

KEY		VEGETATION STRUCTURE														
PERCENT COVER CODE	Percent Cover Class	TOPOGRAPHIC POSITION HYDROLOGIC REGIME	PLOT 1, 5% lower slope, Moist Upland	Upper Slope, By Access Rd. Dry Upland,	PLOT 3, Dry, level Upland Hilltop Control	PLOT 2, Hilltop Pad #2	Hilltop Pad #1	Hilltop Pad #4	Upper Slope, Dry upland	Lower slope, Landscaped	Wetland level, slope base	2% slope base Thick chips	Slope & Hill top, north side	Slope wetland south side	Upland slope & hilltop, south side	Upper Slope & hilltop Along Access Rd
r	rare	<b>SPECIES TOTALS:</b>	68 spp.	40 spp.	32 spp.	12 spp.	7 spp.	23 spp.	27 spp.	19 spp.	30 spp.	7 spp.	19 spp.	30 spp.	21 spp.	30 spp.
+	sporadic	<b>STRATUM</b>														
1-	1-2%	Tree %Cover	5%		2%	-	-	-	-	-	-	-	-	-	-	-
1+	2-5%	High Shrub %Cover	30%		4%	-					4%	-				
(1P abundant <5%)		Avg stratum Ht.	15'		4'						6'					
2-	5-12%	Low Shrub- total Cover	30%		(53%)											
		Ericaceous	15%		8%											
2+	12-25%	Avg. Stratum Ht.	1.5'		2'											
		Non-ericaceous % Cover	15%		45%	3%					2%	2%				
		Avg. Stratum Ht:	5'		3'	2.5'					2.5'	6'				
3	25-50%	Herbs Total % Cover	50%		50%	42%	mugwort			lawn	95%	35%				
		Avg. Stratum Ht :	10"		2.5'	3.5'					1.5' - 3'	1.2'-3'				
		Gram. %Cover:	25%		20%	12%					20%	15%				
4	50-75%	Forbs %Cover:	25%		30%	30%					75%	20%				
		Moss %Cover:														
5	75-100%	clubmoss %Cover:	4%		12%	0%	-					0%				







Grasses, cont.		4 spp.	5 spp.	2spp.	3spp.	2 spp.	4 spp.	5 spp.		1 sp.							
SCIENTIFIC NAME	COMMON NAME	CENTRAL SOUTH PLOT 1	SE ROUTE	SE CONTROL Plot 3	SWPad#2 Plot 2	NE Pad#1	NWPad#4	SW ROUTE	BY RD Pad#3	Plot 4	Plot 5	NORTH WEST ROUTE	NORTH EAST ROUTE	NORTH EAST ROUTE	CENTRAL ROUTE	CT DEEP OFFICIAL STATUS	WETLAND INDIC STATUS
<i>Dicanthelium spaerocarpon</i> *	Round-fruited rosette panicgrass	1-.2															FAC
<i>Digitaria spp.</i>	Crabgrass spp..	2-.3		1-.1	2-.3												
<i>Echinochloa crusglli</i>	barnyardgrass				1-.1											naturalized	FAC
<i>Festuca spp.</i>	Fescues				2-.2												
<i>Panicum capillare</i>	Witch grass									1+.2							FAC
<i>Panicum virgatum</i>	Switchgrass	1-.2															FAC
<i>Schenodorus pratensis</i>	Meadow rye grass																
<i>Schizachyrium scoparium</i>	Little bluestem			3.3													FACU
<i>Setaria faberi (Herrm.)</i>	Chinese foxtail				2-.2											naturalized	UPL
<i>Setaria viridis</i>	Green foxtail	1-.1														naturalized	UPL
<i>Tridens flava</i>	Purpletop Grass																FACU
<b>Sedges &amp; Rushes</b>		1 spp.	2spp.	1 spp.				2 spp.			3 spp.						
<i>Bulbostylis capillaris</i>	Tufted hair-sedge																UPL
<i>Carex lurida</i>	Sallow sedge									2+.2							OBL
<i>Carex pensylvanica</i>	Penn sedge			2+.3													UPL
<i>Carex stricta</i>	Tussock sedge										1-.2						OBL
<i>Carex tribuloides</i>	Blunt broom sedge										1+.2						FACW
<i>Carex spp.</i>	Sedges																
<i>Cyperus strigosus</i>	Umbrella sedge	1-.2															FACW
<i>Eleocharis obtusa</i>	Spike rush																
<i>Juncus effusus</i>	Common soft rush									2-.3							FACW
<i>Juncus tenuis</i>	Path rush																FAC
<i>Scirpus cyperinus</i>	Woolrush										2-.1						FACW
<b>Ferns</b>		2 spp.	2spp.					1sp.	2 sp.	1 sp.			1 sp.				
<i>Athyrium felix-femina</i>	Lady fern									1+.2							FAC
<i>Dennstaedtia punctiloba</i>	Hay-scented fern	2-.3															UPL
<i>Onoclea sensibilis</i>	Sensitive fern																FACW
<i>Osmundastrum cinnamomeum</i>	Cinnamon fern																FACW
<i>Pteridium aquilinum</i>	Bracken fern	1-.2															FACU
<b>VINES</b>		3 spp.	3spp						2 spp.			1 sp.					
<i>Celastrus orbiculatus</i>	Asian bittersweet	1+.3														native	UPL
<i>Fallopia scandens</i>	Climbing buckwheat																FACU
<i>Parthenocissus quinquefolia</i>	Virginia creeper	2-.3															FACU
<i>Vitis labrusca</i>	Grapes	3.3															FACU
<b>Clubmosses</b>		1 spp.		2 spp.			2 spp.	2 spp.				1 spp.					
<i>Dendrolycopodium obscurum</i>	Princess Pine																listed
<i>Diphasiastrum digitatum</i>	So.ground cedar			2+.3													listed
<i>Lycopodium clavatum</i>	Staghorn clubmoss	1+.2		1-.2													listed
<b>MOSSES</b>																	
<i>Politrichum spp.</i>																	listed
<b>LICHENS</b>																	
<i>Cladonia sp.</i>	Reindeer lichen																listed

**Table 2, continued.**

**NOTES:**

\* *Dicanthelium sphaerocarpon* var. *isophyllum* is a CT Special Concern species, presumed extirpated. Survey season was not correct for ID to variety for this genus.

Survey was conducted by Sigrun N.Gadwa,MS of Carya Ecological Services,LLC between August and mid October 2019, for REMA Ecological Services, LLC of Manchester, CT

Search Intensity: High in plots (with Braun-Blanquet scores); low to moderate along survey routes.

Therrien/Lanata segment is SW of New London Turnpike; Length is ~ 1040 feet. Eversource TLC Segment is northeast of turnpike; Length is ~ 950 feet

**Table 3: Woody Right-of-Way Species: Host Plants for Selected Lepidopterans & Other Habitat Values**

<i>Scientific Name</i>	<i>Common Name</i>	<i>Selected lepidopterans for which it is a larval food plant</i>	<i>Habitat values</i>
<i>Alnus incana (A. rugosa)</i>	Speckled alder	Yellow-haired dagger moth ( <i>Acronicta impleta</i> ); also feeds on hickory	Smooth gray trunk, twiggy, broad shape, nitrogen-fixer, shades streams
<i>Comptonia peregrina</i>	Sweetfern	Sweetfern underwing ( <i>Catocala anti-nympha</i> ). Also many generalist moths	Drought-tolerant evergreen heath; low winter cover, pollen source. Sizable nuts.
<i>Gaylussaccia baccata</i>	Black huckleberry	Spring azure ( <i>Celastrina ladon</i> ), Common blue ( <i>Polyommatus icarus</i> ) Apple sphynx moth ( <i>Sphinx gordius</i> ), among others.	Blooms in early spring, sweet fruit in mid summer; eaten by many generalist caterpillars
<i>Ilex verticillata</i>	Winterberry	<i>Callophrys henrici</i> (Henry's elfin) Generalist feeder Harris's Three-spot ( <i>Harrisimemna trisignata</i> ) also eats cherry, viburnum, willow & many others.	Multi-stem clumps, poor cover, but whip-poor-wills could fly through them. Persistent red winter fruit.
<i>Lindera benzoin</i>	Spicebush	<i>Papilio troilus</i> (Spicebush swallowtail), also eats sassafras	wetland forest understory shrub, oil-rich late fruit in mid fall, yellow early spring flowers
<i>Juniperus virginiana and Juniperus communis</i>	Red cedar & Pasture juniper	Juniper hairstreak ( <i>Callophrys gryneus</i> ), <i>Juniper geometer (Patalene olyzonaria)</i> ; <i>Digrammia continua</i> (Curve-lined angle)	<i>J. virginiana</i> Dense low tree, valuable cover in winter, perch site, abundant blue fruits are valuable food for birds. <i>J. communis</i> Spreading clumps, blue fruits in fall & winter, attract birds.
<i>Morella pennsylvanica</i>	Northern bayberry	Purple crested slug, <i>Adoneta spinuloides</i>	semi-evergreen, oil-rich blue fruits in fall & winter, aromatic
<i>Rhamnus alnus</i>	European buckthorn	Henry's Elfin ( <i>Callophrys henricii</i> ) & Tissue moth, a carpet ( <i>Triphosa haesitata</i> ) - host-specific; Canadian melanolophia	Listed as invasive in Connecticut; rapid clonal spreader shades & crowds out herbs & lower shrubs; its spread has let rare moths recover.
<i>Rubus allegheniensis</i>	Alleghany Blackberry	Lunate Zale ( <i>Zale lunata</i> ), to 5cm long; also apple, cherry, willow; tufted thyatrid	large pink flowers, large purple fruits, good for jam, & birds, valuable cover, thorny, purplish fall color
<i>Rhus spp.</i>	Sumac spp.	Spring azure ( <i>Celastrina ladon</i> ), Common blue ( <i>Polyommatus icarus</i> ) Slender	Forms tall patches, often extensive; early spring flowers, mid fall fruit .
<i>Salix discolor</i>	Silky willow	Mourning cloak ( <i>Nymphalis antiopa</i> ), Viceroy ( <i>Limenitis archippus</i> ), Deamy duskywing ( <i>Erynnis icelus</i> ) the generalist, Speckled fruitworm ( <i>Orthosia hibisci</i> ), which flies in early spring	Attractive foliage, bank stabilizer, dense, yellow-green twigs, attracts birds
<i>Sambucus nigra</i>	Common elderberry	Ruby quaker ( <i>Orthosia rubescens</i> ), a generalist, flies in early spring	Abundant flat flower clusters in midsummer, large clusters of juicy black fruit in late summer, early fall
<i>Spiraea latifolia</i>	Meadowsweet	early instars only; New England buck moth ( <i>Hemileuca leucena</i> )	Mid-summer flowers, produces small seeds for birds, rodents.



Table 3, continued

Scientific Name	Common Name	Selected lepidopterans for which it is a larval food plant	Habitat values
<i>Vaccinium angustifolium</i> , <i>Vaccinium vacillans</i>	Low-bush blueberry	Spring azure ( <i>Celastrina ladon</i> ), Common blue ( <i>Polyommatus icarus</i> ) Slender clearwing ( <i>Hemaris gracilis</i> ) Sordid	Forms very low patches, often extensive; early spring flowers, summer fruit is low enough for BT's.
<i>Vaccinium corymbosum</i>	High-bush blueberry	Yellow-necked caterpillar ( <i>Datana ministra</i> ), 4.5 cm; also oak, birch, rose	Large juicy fruit, delicate twiggy branches, used by many insects
<i>Viburnum dentatum</i>	Arrowwood viburnum	Rose hooktip ( <i>Oreta rosea</i> ) - limited to viburnums; also eaten by many moths that	Leaves with sharp-teeth, crisp veins, white showy flowers, dark blue fruit clusters, multiple stems.
<i>Viburnum lentago</i>	Nannyberry viburnum	One of many larval hosts of Intractable Quaker ( <i>Himella intractata</i> ), common.	late spring flowers, early fall fruit, multi-stemmed, dense growth form.
<b>TREES ON RIGHT-OF-WAY, CUT DOWN AS SAPLINGS</b>			
<i>Quercus coccinea</i>	Scarlet Oak	Each feeds on all oaks: banded hairstreak ( <i>Satyrium salanus</i> ), red-lined pano-poda ( <i>Panoparda rufimargo</i> ), Common oak moth ( <i>Phoberia atomaria</i> ) pupa overwinters, flies in April. Definite tussock moth ( <i>Orygia definita</i> ), Variable oak leaf caterpillar ( <i>Lochmaeus manteo</i> ) . Red-crossed button slug ( <i>Tortricidia obliqua</i> ), early buttonslug ( <i>Tortiricidia estacea</i> ), elegant-tailed slug ( <i>Packardia elegans</i> ), one-spotted variant ( <i>Hypagyrtis unipunctata</i> ) plus many hundreds more butterfly & moth species.	
<i>Quercus rubra</i>	Red oak		
<i>Quercus velutina</i>	Black oak		