

# NORTHEASTERN GEOSCIENCE

Volume 32

C. J. Brown & M. A. Thomas - Major and Trace Element Geochemistry and Background Concentrations for Soils in Connecticut

Appendix 1. Lithologic descriptions and grain-size abundances of C-horizon soil samples collected from 79 sites in Connecticut, and their underlying lithochemical rock groups and geologic terranes, surficial materials, and soil properties and classification

Field Identifier	Latitude <sup>5</sup>	Longitude <sup>5</sup>	Collection agency	Location description	Depth in cm	Generalized lithology and lithochemical character (Robinson and Kapo, 1993)			Connecticut Geology Nomenclature (compiled by Rodgers, 1985)				Connecticut Surficial Geology Nomenclature (Stone et al., 1992)			Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions. Available online at <a href="http://soils.usda.gov/technical/classification/ossd/index.html">http://soils.usda.gov/technical/classification/ossd/index.html</a>		
						Geologic Province	Rock Group A (GpA)	Rock Group B (GpB)	Terrane	Unit code	Unit	Age	Description	IMS Legend <sup>4</sup>	Grouped category	Soil Series Symbol	Soil Series Name	
99-C	41.17141	73.32197	DEEP	Aspectuck Land Trust, Sturges Hwy, Westport	51-69	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	OCr?	Rowe Schist	Ordovician / Cambrian	Till	Till	Till	108	Saco silt loam	
62-C	41.20905	73.28651	DEEP	Hemlock Reservoir, Fairfield	66-76	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Sulfidic Schists	IapetusOCTerr/CTValleySyncl	Otfc	Carringtons Pond Member of Trap Falls Fm.	Ordovician	Thick Till	Thick Till	Thick Till	62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	
97-C	41.27111	72.63704	DEEP	Buffalo Bay, Madison	61-76	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Zp, Zsph, and Pn	Plainfield Fm., Potter Hill Granite Gneiss & Narragansett Pier Granite Undiv.	Proterozoic Z		End Moraine	Coarse	38C	Hinckley gravelly sandy loam, 3 to 15 percent slopes	
244-C	41.27675	73.0257	USGS	Meeting House Lane, Orange	41-48	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Ora	Wepawaug Schist	Devonian / Silurian	Till	Till	Till	60B	Canton and Charlton soils, 3 to 8 percent slopes	
11-C	41.27733	73.0034	DEEP	Orange Hills Cntry Club, Orange	61-71	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	IapetusOCTerr/CTValleySyncl	Ora	Upper part of Malby Lakes	Ordovician	Till	Till	Till	84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	
89-C	41.27891	73.51938	DEEP	Conservation Commission, Remington Rd, Ridgefield	56-76	Grenville Shelf Sequence	Carbonate Rocks	Carbonate Rocks	Proto_NAcontTerr/OrdnandCambShel	OCs	Stockbridge Marble	Ordovician / Cambrian	Till	Till	Till	73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	
19-C	41.29596	72.34133	DEEP	Great Island Wildlife Area, Old Lyme	54-81	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Zw	Waterford Group	Proterozoic Z	Till	Till	Till	75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	
55-C	41.29749	73.4305	DEEP	Barretts Ln, Redding	66-74	Eugeosynclinal Sequence	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Og	Ordovician? granitic gneiss	Ordovician	Till	Till	Till	62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	
78-C	41.31711	72.51766	DEEP	Kelseytown Rd, Clinton	69-86	Eugeosynclinal Sequence	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Omo	Monson Gneiss	Ordovician	Till	Till	Till	47C	Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony	
44-C	41.32261	73.41804	DEEP	Gallows Hill Rd, Redding	74-81	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	OCr	Rowe Schist	Ordovician / Cambrian	Till	Till	Till	62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	
79-C	41.34426	73.04897	DEEP	Ansonia Nature and Recreation Center, Ansonia	73-107	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	DSt	The Straits Schist	Devonian / Silurian	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
32-C	41.35286	72.73858	DEEP	Dudly preserve, Guilford	38-51	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	Jp	Portland Arkose	Jurassic	Till	Till	Till	78C	Holyoke-Rock outcrop complex, 3 to 15 percent slopes	
75-C	41.37132	73.05679	DEEP	Birmingham Utility Watershed, Seymour	74	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	IapetusOCTerr/CTValleySyncl	Ohb	Beardsley Member of Harrison Gneiss	Ordovician	Till	Till	Till	73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	
81-C	41.40037	73.29758	DEEP	Newtown Cntry Club, Newtown	66-89	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	IapetusOCTerr/CTValleySyncl	Ob	Brookfield Gneiss	Ordovician	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
12212-C	41.40579	72.17969	USGS	Lake Konomoc, Waterford	76-102	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Zp	Plainfield Fm.	Proterozoic Z		Sand and gravel overlying sand overlying fines	Coarse over Fine	38E	Hinckley gravelly sandy loam, 15 to 45 percent slopes	
51-C	41.415	72.23838	DEEP	Nehantic State Forest, Walnut Hill, East Lyme	61-76	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Zp	Plainfield Fm.	Proterozoic Z	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
1524-C	41.42577	73.50091	USGS	King St. school, Danbury	63-86	Grenville Belt	Granite	Grenville Granite	Proto_NAcontTerr/OrdnandCambShel	Ygr	Pink Granitic Gneiss	Proterozoic Y	Till	Till	Till	306	Udorthents-Urban land complex	
67-C	41.4287	72.7873	DEEP	Tyler Mill, Taramac Swamp Rd, Wallingford	63-84	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	TRnh	New Haven Arkose	Triassic	Till	Till	Till	87B	Wethersfield loam, 3 to 8 percent slopes	
21-C	41.43569	72.69733	DEEP	Rt 77, Durham	33-46	Mesozoic Basin	Mafic Rocks	Basalt	IapetusOCTerr/CTValleySyncl	Jta	Talcott Basalt	Jurassic	Till	Till	Till	77D	Cheshire-Holyoke complex, 15 to 35 percent slopes, very rocky	
53-C	41.438783	72.759167	DEEP	Scard Rd, Town of Wallingford Prop.	58-84	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	TRnh	New Haven Arkose	Triassic	Till	Till	Till	55B	Watchaug fine sandy loam, 3 to 8 percent slopes	
41-C	41.45998	72.33636	DEEP	Devils Hopyard SP, East Haddam	61-69	NH - ME Sequence	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Dc	Canterbury Gneiss	Devonian	Sand and Gravel	Coarse	Coarse	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
38-C	41.46243	72.99877	DEEP	Naugatuck SF, Bethany	86-102	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	DSt	The Straits Schist	Devonian / Silurian	Till	Till	Till	62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	
50-C	41.4636	72.25302	DEEP	Nehantic SF, Rt 85, Salem	58-66	Avalon	Granite	Avalon Granite	IapetusOCTerr/CTValleySyncl	Zsh	Hope Valley Alaskite Gneiss	Proterozoic Z	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
60-C	41.46405	72.58323	DEEP	Cockaponset SF, Arkay Dr, Haddam	43-53	Sequence	Granite	Granite (other)	AvalonTerr/OrdnandCambShel	Omo	Monson Gneiss	Ordovician	Thick Till	Thick Till	Thick Till	85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	
10601-C	41.47186	71.90276	USGS	Patchaug SF, North Stonington	51-66	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Zp	Plainfield Fm.	Proterozoic Z	Thick Till	Thick Till	Thick Till	46B	Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony	
52-C	41.48203	71.85022	DEEP	Patchaug SF, Fowler Rd, North Stonington	66-91	Avalon	Granite	Avalon Granite	IapetusOCTerr/CTValleySyncl	Zspp	Porphyritic phase of Potter Hill Granite Gneiss	Proterozoic Z	Till	Till	Till	61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	
70-C	41.484483	72.437983	DEEP	Alger Rd, East Hampton	79-91	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	AvalonTerr/OrdnandCambShel	SOH	Hebron Gneiss	Devonian / Ordovician	Till	Till	Till	61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	
92-C	41.52472	71.87409	DEEP	Patchaug SF, Coal Pit Hill, Griswold	56-66	Avalon	Granite	Avalon Granite	IapetusOCTerr/CTValleySyncl	Zspp	Porphyritic phase of Potter Hill Granite Gneiss	Proterozoic Z	Till	Till	Till	75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	
86-C	41.53098	72.17232	DEEP	Bear Hill Wildlife Area, Bozrah	66-81	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	IapetusOCTerr/CTValleySyncl	SOH	Hebron Gneiss	Ordovician	Till	Till	Till	52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	
8692-C	41.55775	73.24319	USGS	Small suburb	64-86	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Or	Ratlum Mountain Schist	Ordovician	Till	Till	Till	60B	Canton and Charlton soils, 3 to 8 percent slopes	
39-C	41.56061	72.44452	DEEP	Salmon R. SF, Colchester	56-66	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	IapetusOCTerr/CTValleySyncl	SOH	Hebron Gneiss	Devonian / Ordovician	Sand and Gravel	Coarse	Coarse	38E	Hinckley gravelly sandy loam, 15 to 45 percent slopes	
66-C	41.59418	72.20163	DEEP	Pease Brook Wildlife Area, Lebanon	84-102	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	AvalonTerr/OrdnandCambShel	SOH	Hebron Gneiss	Devonian / Ordovician	Till	Till	Till	52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	
57-C	41.60969	71.80463	DEEP	Patchaug SF, Voluntown	76-91	Avalon	Granite	Avalon Granite	Proto_NAcontTerr/OrdnandCambShel	Zss	"Sicuate" Granite Gneiss Basal marble member of NewarkTerr/OrdnandCambShel	Proterozoic Z	Till	Till	Till	47C	Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony	
29-C	41.61115	73.50368	DEEP	Taber Rd, Sherman	66	Sequence	Carbonate Rocks	Carbonate Rocks	IapetusOCTerr/CTValleySyncl	Owm	Walloomsac Schist	Ordovician	Till	Till	Till	48C	Georgia and Amenia silt loams, 8 to 15 percent slopes	
72-C	41.62041	72.8237	DEEP	New Britain Reservoir, Southington	46-56	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	Jsm	Shuttle Meadow Fm.	Jurassic	Till	Till	Till	79E	Rock outcrop-Holyoke complex, 3 to 45 percent slopes	
17-C	41.62141	73.29079	DEEP	Horse Heaven Rd, Washington	76-91	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Or	Ratlum Mountain Schist	Ordovician	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
68-C	41.62387	72.55776	DEEP	Mesomash SF, Portland	63	Sequence	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Ogl	Glastonbury Gneiss	Ordovician	Till	Till	Till	3	Ridgebury, Leicester, and Whitman soils, extremely stony	
90-C	41.63351	72.91075	DEEP	Pine Valley Golf Course, Southington	64-74	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	TRnh	New Haven Arkose	Triassic		Sand overlying sand and gravel	Stacked Coarse	Coarse	36B	Windsor loamy sand, 3 to 8 percent slopes
30-C	41.67021	72.4794	DEEP	Mesomash SF, Glastonbury	38-69	Sequence	Granite	Granite (other)	AvalonTerr/OrdnandCambShel	Omo	Monson Gneiss	Ordovician	Till	Till	Till	62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	
3433-C	41.67261	71.7932	USGS	Patchaug SF, Sterling	63-74	Avalon	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Zss	"Sicuate" Granite Gneiss	Proterozoic Z	Sand and Gravel	Coarse	Coarse	62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	
85-C	41.67427	73.29311	DEEP	Rumsey Hall School, Washington	61-71	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Or	Ratlum Mountain Schist	Ordovician	Sand and Gravel	Coarse	Coarse	34A	Merrimac sandy loam, 0 to 3 percent slopes	
46-C	41.69102	71.9545	DEEP	Rt 14A, Plainfield	66-86	Avalon	Mafic Rocks	Mafic Rocks	Proto_NAcontTerr/OrdnandCambShel	Oqb	Black Hill Member of Quinebaug Fm.	Ordovician	Sand	Stacked Coarse	Coarse	38E	Hinckley gravelly sandy loam, 15 to 45 percent slopes	
48-C	41.69168	73.35839	DEEP	Mt Bushnell SP, Washington	53-66	Grenville Belt	Metam. Rocks Undiv.	(other)	IapetusOCTerr/CTValleySyncl	Cd	Dalton Fm.	Cambrian / Proterozoic Z	Till	Till	Till	86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	
61-C	41.7105	73.16974	DEEP	White Memorial Fdn, Pitch Rd, Litchfield	61-81	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Or	Ratlum Mountain Schist	Ordovician	Till	Till	Till	75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	
2409-C	41.71457	72.55464	USGS	Tobacco/corn, Glastonbury	61	Mesozoic Basin	Basin Sed.		IapetusOCTerr/CTValleySyncl	Jp	Portland Arkose	Jurassic	Sand and gravel overlying sand	Stacked Coarse	Coarse	33A	Hartford sandy loam, 0 to 3 percent slopes	
22-C	41.73393	73.20555	DEEP	Whites Wood rd, Litchfield	71-91	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	IapetusOCTerr/CTValleySyncl	Ob	Brookfield Gneiss	Ordovician	Swamp overlying Fines	Natural Postglacial	Fine	107	Limerick and Lim soils	
98-C	41.74717	73.04431	DEEP	Roraback Wildlife Area, Harwinton	30-66	Eugeosynclinal Sequence	Granite	Granite (other)	IapetusOCTerr/CTValleySyncl	Dng	Nonewaug Granite	Devonian	Thick Till	Thick Till	Thick Till	84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	
36-C	41.75093	72.14958	DEEP	Boulevard Rd, Windham	66-86	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	IapetusOCTerr/CTValleySyncl	Ota	Tatnic Hill Fm.	Ordovician	Till	Till	Till	3	Ridgebury, Leicester, and Whitman soils, extremely stony	
76-C	41.76045	73.49519	DEEP	Macedonia Brook SP, Kent	30-46	Grenville Belt	Metam. Rocks Undiv.	Sulfidic Schists	IapetusOCTerr/CTValleySyncl	Ygs	Rusty Mica Schist and Gneiss	Proterozoic Y	Till	Till	Till	62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	
82-C	41.76157	72.39473	DEEP	Times Farm Rd, Andover	76-91	NH - ME Sequence	Metam. Rocks Undiv.	Calgranofels	IapetusOCTerr/CTValleySyncl	SOH	Hebron Gneiss	Ordovician	Sand and Gravel	Coarse	Coarse	60B	Canton and Charlton soils, 3 to 8 percent slopes	
14-C	41.76172	72.93804	DEEP	Nassahogon SF, Burlington	94-119	Eugeosynclinal Sequence	Metam. Rocks Undiv.	Pelitic Rocks	IapetusOCTerr/CTValleySyncl	Otw	Wildcat Member of Taine Mountain Fm.	Ordovician	Sand and Gravel	Coarse	Coarse	38C	Hinckley gravelly sandy loam, 3 to 15 percent slopes	
40-C	41.76883	71.99094	DEEP	Winham Rd, Brooklyn	69-84	Avalon	Metam. Rocks Undiv.	(other)	AvalonTerr/OrdnandCambShel	Ota	Tatnic Hill Fm.	Ordovician	Till	Till	Till	73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	
83-C	41.77779	71.80762	DEEP	Viall Rd, Killingly	56-61	Avalon	Granite	Avalon Granite	IapetusOCTerr/CTValleySyncl	Zsp	Ponagansett Gneiss	Proterozoic Z	Thick Till	Thick Till	Thick Till	61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	
63-C	41.77946	72.76523	DEEP	S. Branch Park R. Flood Cntrl Site 2 (Bugbee), W. Hartford	51-66	Mesozoic Basin	Basin Sed.		Proto_NAcontTerr/OrdnandCambShel	Jeb	East Berlin Fm.	Jurassic	Sand and Gravel	Coarse	Coarse	37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	
58-C	41.80075	73.49284	DEEP	Caray Hill, Sharon	61-76	Grenville Belt	Metam. Rocks Undiv.	(other)	Proto_NAcontTerr/OrdnandCambShel	Ygh	Hornblende gneiss and amphibolite	Proterozoic Y	Till	Till	Till	60B	Canton and Charlton soils, 3 to 8 percent slopes	
88-C	41.82278	73.30493	DEEP	Mohaw SF, Cornwall	41-56	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	IapetusOCTerr/CTValleySyncl	Cma	Manhattan Schist	Proterozoic Z	Till	Till	Till	413E	Bice-Millsite complex, 15 to 45 percent slopes, very rocky	
12-C	41.84364	73.15331	DEEP	Stillwater Pond SP, Torrington	23-51	Eugeosynclinal Sequence	Mafic Rocks	Mafic Rocks	Proto_NAcontTerr/OrdnandCambShel	Cm	Manhattan Schist	Proterozoic Z	Gravel	Coarse	Coarse	21A	Ninigret and T	