

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
1A	Fluvaquents-Udifuvents complex, 0 to 3 percent slopes, frequently flooded	Very limited	Fluvaquents, frequently flooded 45% Depth to saturated zone Frost action Flooding Slope shape across Udifuvents, frequently flooded 40% Flooding Frost action Depth to saturated zone Hillslope position Slope shape across Wayland 10% Depth to saturated zone Frost action Flooding Low strength Naples Creek 5% Frost action Flooding Depth to saturated zone Low strength Hillslope position
2A	Geneseo silty clay loam, 0 to 3 percent slopes	Very limited	Geneseo 90% Frost action Flooding Hillslope position Slope shape across Low strength Naples Creek 10% Frost action Flooding Depth to saturated zone Low strength Hillslope position
3A	Hemlock silty clay loam, 0 to 3 percent slopes	Very limited	Hemlock 90% Frost action Flooding Low strength Depth to saturated zone Hillslope position Naples Creek 10% Frost action Flooding Depth to saturated zone Low strength Hillslope position

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4A	Naples Creek silty clay loam, 0 to 3 percent slopes	Very limited	Naples Creek 90% Frost action Flooding Depth to saturated zone Low strength Hillslope position Wayland 5% Depth to saturated zone Frost action Flooding Low strength Hemlock 5% Frost action Flooding Low strength Depth to saturated zone Hillslope position
5A	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	Very limited	Wayland 60% Depth to saturated zone Frost action Flooding Low strength Wayland, very poorly drained 30% Ponding Depth to saturated zone Frost action Flooding Slope shape across Wakerville 10% Frost action Flooding Depth to saturated zone
12D	Rockrift channery silt loam, 15 to 25 percent slopes	Very limited	Rockrift 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Mongaup, very stony 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 5% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position
13F	Rock outcrop-Arnot complex, 25 to 70 percent slopes	Not rated	Rock outcrop 55%

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14D	Cadosia channery silt loam, 15 to 25 percent slopes	Very limited	Cadosia 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Lordstown, very stony 10% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Mardin 5% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position
15A	Guyanoga channery silt loam, fan, 0 to 3 percent slopes	Somewhat limited	Guyanoga, fan 90% Frost action Flooding Hillslope position Slope shape across Chenango, fan 5% Frost action Flooding Hillslope position Slope shape across
15B	Guyanoga channery silt loam, fan, 3 to 8 percent slopes	Somewhat limited	Guyanoga, fan 90% Frost action Flooding Hillslope position Slope shape across Chenango, fan 5% Frost action Flooding Hillslope position Slope shape across
16A	Almond channery silt loam, 0 to 3 percent slopes	Very limited	Almond 80% Depth to saturated zone Frost action Low strength Norchip 8% Depth to saturated zone Frost action Slope shape across Low strength Ontusia 7% Depth to saturated zone Frost action Gretor 5% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient

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16B	Almond channery silt loam, 3 to 8 percent slopes	Very limited	Almond 80% Depth to saturated zone Frost action Slope direction and gradient Low strength Gretor 5% Frost action Depth to saturated zone Slope Slope direction and gradient Hillslope position Ontusia 5% Depth to saturated zone Frost action Slope direction and gradient Norchip 5% Depth to saturated zone Frost action Slope shape across Low strength
16C	Almond channery silt loam, 8 to 15 percent slopes	Very limited	Almond 80% Depth to saturated zone Frost action Slope Slope direction and gradient Low strength Salamanca 5% Slope Depth to saturated zone Slope direction and gradient Frost action Low strength Norchip 5% Depth to saturated zone Frost action Slope shape across Low strength Ontusia 5% Depth to saturated zone Frost action Slope Slope direction and gradient Gretor 5% Slope Frost action Depth to saturated zone Slope direction and gradient Hillslope position

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18A	Homer fine sandy loam, 0 to 3 percent slopes	Very limited	Homer 90% Frost action Depth to saturated zone Phelps 5% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Fine-loamy, mixed, active, mesic Typic Argiaquolls 5% Depth to saturated zone Frost action Slope shape across Low strength
19A	Fine-loamy, mixed, active, mesic, Typic Argiaquolls, 0 to 3 percent slopes	Very limited	Fine-loamy, mixed, active, mesic Typic Argiaquolls 80% Ponding Depth to saturated zone Frost action Slope shape across Low strength Homer 8% Frost action Depth to saturated zone Atherton 7% Depth to saturated zone Frost action Slope shape across Palms, undrained 5% Ponding Depth to saturated zone Frost action Low strength
20A	Atherton and Fine-loamy, mixed, active, mesic, Typic Argiaquolls, 0 to 3 percent slopes	Very limited	Atherton 41% Depth to saturated zone Frost action Slope shape across Fine-loamy, mixed, active, mesic Typic Argiaquolls 39% Ponding Depth to saturated zone Frost action Slope shape across Low strength Homer 8% Frost action Depth to saturated zone Canandaigua 7% Depth to saturated zone Frost action Low strength Slope shape across

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24A	Howard gravelly loam, 0 to 3 percent slopes	Somewhat limited	Howard 80% Frost action Hillslope position Slope shape across Palmyra 10% Frost action Hillslope position Slope shape across Arkport 5% Frost action Hillslope position Slope shape across
24B	Howard gravelly loam, 3 to 8 percent slopes	Somewhat limited	Howard 80% Frost action Hillslope position Slope shape across Slope direction and gradient Palmyra 10% Frost action Hillslope position Slope shape across Slope direction and gradient Arkport 5% Frost action Hillslope position Slope shape across Slope direction and gradient
24C	Howard gravelly loam, 8 to 15 percent slopes	Somewhat limited	Howard 80% Frost action Hillslope position Slope direction and gradient Slope shape across Slope Palmyra 10% Frost action Slope direction and gradient Hillslope position Slope shape across Slope Arkport 5% Frost action Slope direction and gradient Slope shape across Slope Hillslope position

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24D	Howard soils, 15 to 25 percent slopes	Very limited	Howard 65% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Palmyra 20% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Arkport 13% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Phelps 2% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength
25A	Chenango gravelly loam, 0 to 3 percent slopes	Somewhat limited	Chenango 90% Frost action Hillslope position Slope shape across Castile 8% Frost action Depth to saturated zone Hillslope position Slope shape across Valois 2% Frost action Hillslope position Slope shape across
25B	Chenango gravelly loam, 3 to 8 percent slopes	Somewhat limited	Chenango 90% Frost action Hillslope position Slope shape across Slope direction and gradient Castile 5% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient Valois 5% Frost action Hillslope position Slope shape across Slope direction and gradient

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25C	Chenango gravelly loam, 8 to 15 percent slopes	Somewhat limited	Chenango 90% Frost action Hillslope position Slope direction and gradient Slope shape across Slope Castile 5% Frost action Depth to saturated zone Slope direction and gradient Hillslope position Slope shape across Valois 5% Frost action Slope direction and gradient Hillslope position Slope shape across Slope
25D	Chenango gravelly loam, 15 to 25 percent slopes	Very limited	Chenango 90% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Valois 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
25E	Chenango gravelly loam, 25 to 35 percent slopes	Very limited	Chenango 90% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Valois 10% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
26B	Chenango channery loam, fan, 3 to 8 percent slopes	Somewhat limited	Chenango, fan 85% Frost action Flooding Hillslope position Slope shape across Slope direction and gradient Guyanoga, fan 5% Frost action Flooding Hillslope position Slope shape across Slope direction and gradient Castile 5% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient

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27B	Castile gravelly silt loam, 3 to 8 percent slopes	Somewhat limited	Castile 85% Frost action Depth to saturated zone Hillslope position Slope shape across Chenango 5% Frost action Hillslope position Slope shape across
31A	Collamer silt loam, 0 to 3 percent slopes	Very limited	Collamer 85% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Niagara 10% Frost action Depth to saturated zone Low strength Schoharie 5% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across
31B	Collamer silt loam, 3 to 8 percent slopes	Very limited	Collamer 85% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient Niagara 10% Frost action Depth to saturated zone Low strength Slope direction and gradient Schoharie 5% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across
31C	Collamer silt loam, 8 to 15 percent slopes	Very limited	Collamer 85% Frost action Slope direction and gradient Slope Depth to saturated zone Hillslope position Niagara 10% Frost action Depth to saturated zone Low strength Slope direction and gradient Schoharie 5% Low strength Frost action Depth to saturated zone Slope direction and gradient Slope

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31D	Collamer silt loam, 15 to 25 percent slopes	Very limited	Collamer 90% Slope Frost action Slope direction and gradient Depth to saturated zone Hillslope position Schoharie 5% Slope Low strength Slope direction and gradient Frost action Depth to saturated zone Niagara 5% Frost action Depth to saturated zone Low strength Slope Slope direction and gradient
32A	Dunkirk fine sandy loam, 0 to 3 percent slopes	Very limited	Dunkirk 90% Frost action Low strength Hillslope position Slope shape across Schoharie 3% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across Niagara 3% Frost action Depth to saturated zone Low strength
32B	Dunkirk fine sandy loam, 3 to 8 percent slopes	Very limited	Dunkirk 90% Frost action Hillslope position Low strength Slope shape across Slope direction and gradient Schoharie 3% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across Niagara 3% Frost action Depth to saturated zone Low strength Slope direction and gradient

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33A	Dunkirk silt loam, 0 to 3 percent slopes	Very limited	Dunkirk 90% Frost action Low strength Hillslope position Slope shape across Niagara 3% Frost action Depth to saturated zone Low strength Schoharie 3% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across
33B	Dunkirk silt loam, 3 to 8 percent slopes	Very limited	Dunkirk 90% Frost action Hillslope position Low strength Slope shape across Slope direction and gradient Schoharie 3% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across Niagara 3% Frost action Depth to saturated zone Low strength Slope direction and gradient
33C	Dunkirk silt loam, 8 to 15 percent slopes	Very limited	Dunkirk 90% Frost action Slope Slope direction and gradient Hillslope position Low strength Schoharie 3% Low strength Slope Slope direction and gradient Frost action Depth to saturated zone Niagara 3% Frost action Depth to saturated zone Low strength

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33D	Dunkirk silt loam, 15 to 25 percent slopes	Very limited	Dunkirk 90% Slope Frost action Slope direction and gradient Low strength Slope shape across Schoharie 5% Slope Low strength Slope direction and gradient Frost action Depth to saturated zone Arkport 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
33E	Dunkirk silt loam, 25 to 35 percent slopes	Very limited	Dunkirk 90% Slope Frost action Slope direction and gradient Low strength Slope shape across Schoharie 5% Slope Low strength Slope direction and gradient Frost action Depth to saturated zone Arkport 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
34A	Lakemont silty clay loam, 0 to 3 percent slopes	Very limited	Lakemont 85% Depth to saturated zone Frost action Low strength Slope shape across Odessa 5% Depth to saturated zone Frost action Low strength Fonda 4% Ponding Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 4% Depth to saturated zone Frost action Low strength Slope shape across Barre 2% Depth to saturated zone Frost action Slope shape across Low strength

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35A	Odessa silt loam, 0 to 3 percent slopes	Very limited	Odessa 85% Depth to saturated zone Frost action Low strength Lakemont 5% Depth to saturated zone Frost action Low strength Slope shape across Churchville 3% Depth to saturated zone Frost action Low strength Rhinebeck 2% Frost action Low strength Depth to saturated zone
35B	Odessa silty clay loam, 3 to 8 percent slopes	Very limited	Odessa 85% Depth to saturated zone Frost action Low strength Lakemont 4% Depth to saturated zone Frost action Low strength Slope shape across Churchville 3% Depth to saturated zone Frost action Low strength Rhinebeck 2% Frost action Low strength Depth to saturated zone
36A	Schoharie silty clay loam, 0 to 3 percent slopes	Somewhat limited	Schoharie 85% Low strength Frost action Hillslope position Slope shape across Cazenovia 5% Frost action Hillslope position Slope shape across Depth to saturated zone Cayuga 3% Frost action Hillslope position Slope shape across Depth to saturated zone

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36B	Schoharie silty clay loam, 3 to 8 percent slopes	Somewhat limited	Schoharie 85% Low strength Frost action Hillslope position Slope shape across Slope direction and gradient Cazenovia 5% Frost action Hillslope position Slope shape across Slope direction and gradient Depth to saturated zone Cayuga 3% Frost action Hillslope position Slope shape across Slope direction and gradient Depth to saturated zone
36C	Schoharie silty clay loam, 8 to 15 percent slopes	Somewhat limited	Schoharie 85% Low strength Frost action Slope direction and gradient Slope Slope shape across Cazenovia 5% Frost action Slope direction and gradient Slope Hillslope position Slope shape across Cayuga 3% Frost action Slope direction and gradient Slope Hillslope position Slope shape across

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36D	Schoharie silty clay loam, 15 to 25 percent slopes	Very limited	Schoharie 85% Slope Low strength Slope direction and gradient Frost action Slope shape across Cazenovia 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Odessa 5% Slope Depth to saturated zone Frost action Low strength Slope direction and gradient Cayuga 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Collamer 2% Slope Frost action Slope direction and gradient Depth to saturated zone Hillslope position
36E	Schoharie silty clay loam, 25 to 45 percent slopes	Very limited	Schoharie 85% Slope Low strength Slope direction and gradient Frost action Slope shape across Odessa 5% Slope Depth to saturated zone Frost action Low strength Slope direction and gradient Cazenovia 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cayuga 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Collamer 2% Slope Frost action Slope direction and gradient Depth to saturated zone Hillslope position

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37A	Schoharie silt loam, 0 to 3 percent slopes	Somewhat limited	Schoharie 85% Low strength Frost action Hillslope position Slope shape across Cazenovia 5% Frost action Hillslope position Slope shape across Depth to saturated zone Cayuga 3% Frost action Hillslope position Slope shape across Depth to saturated zone
37B	Schoharie silt loam, 3 to 8 percent slopes	Somewhat limited	Schoharie 85% Low strength Frost action Hillslope position Slope shape across Cazenovia 5% Frost action Hillslope position Slope shape across Depth to saturated zone Cayuga 3% Frost action Hillslope position Slope shape across Depth to saturated zone
38A	Niagara silt loam, 0 to 3 percent slopes	Very limited	Niagara 85% Frost action Depth to saturated zone Low strength Canandaigua 5% Depth to saturated zone Frost action Low strength Slope shape across Rhinebeck 5% Frost action Low strength Depth to saturated zone Collamer 5% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength

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38B	Niagara silt loam, 3 to 8 percent slopes	Very limited	Niagara 85% Frost action Depth to saturated zone Low strength Canandaigua 5% Depth to saturated zone Frost action Low strength Slope shape across Rhinebeck 5% Frost action Low strength Depth to saturated zone Collamer 5% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength
39A	Rhinebeck silty clay loam, 0 to 3 percent slopes	Very limited	Rhinebeck 90% Frost action Low strength Depth to saturated zone Lakemont 5% Depth to saturated zone Low strength Frost action Slope shape across Niagara 5% Frost action Depth to saturated zone Low strength
41A	Aeric Epiaquepts, 0 to 3 percent slopes	Very limited	Aeric Epiaquepts 50% Depth to saturated zone Frost action Slope shape across Low strength Aeric Epiaquepts 45% Depth to saturated zone Frost action Slope shape across Low strength

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43A	Canandaigua silt loam, 0 to 3 percent slopes	Very limited	Canandaigua 90% Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 4% Ponding Depth to saturated zone Frost action Low strength Slope shape across Lakemont 3% Depth to saturated zone Low strength Frost action Slope shape across Niagara 3% Frost action Depth to saturated zone Low strength
44A	Canandaigua mucky silt loam, 0 to 3 percent slopes	Very limited	Canandaigua 90% Ponding Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 5% Depth to saturated zone Frost action Low strength Slope shape across Lakemont 3% Depth to saturated zone Low strength Frost action Slope shape across Palms, undrained 2% Ponding Depth to saturated zone Frost action Low strength
45A	Fonda mucky silt loam, 0 to 3 percent slopes	Very limited	Fonda 95% Ponding Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 3% Ponding Depth to saturated zone Frost action Low strength Slope shape across Palms, undrained 2% Ponding Depth to saturated zone Frost action Low strength

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46A	Galen fine sandy loam, 0 to 3 percent slopes	Somewhat limited	Galen 90% Depth to saturated zone Frost action Hillslope position Slope shape across
46B	Galen fine sandy loam, 3 to 8 percent slopes	Somewhat limited	Galen 90% Depth to saturated zone Frost action Hillslope position Slope shape across
48A	Arkport fine sandy loam, 0 to 3 percent slopes	Somewhat limited	Arkport 95% Frost action Hillslope position Slope shape across Galen 2% Depth to saturated zone Frost action Hillslope position Slope shape across
48B	Arkport fine sandy loam, 3 to 8 percent slopes	Somewhat limited	Arkport 95% Frost action Hillslope position Slope shape across Galen 2% Depth to saturated zone Frost action Hillslope position Slope shape across
48C	Arkport fine sandy loam, 8 to 15 percent slopes	Somewhat limited	Arkport 95% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Galen 2% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient
48D	Arkport fine sandy loam, 15 to 25 percent slopes	Very limited	Arkport 90% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Dunkirk 8% Slope Frost action Slope direction and gradient Hillslope position Low strength Palmyra 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

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49B	Arkport loamy fine sand, 3 to 8 percent slopes	Somewhat limited	Arkport 95% Frost action Hillslope position Slope shape across Galen 2% Depth to saturated zone Frost action Hillslope position Slope shape across
49D	Arkport loamy fine sand, 15 to 25 percent slopes	Very limited	Arkport 95% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Dunkirk 3% Slope Frost action Slope direction and gradient Hillslope position Low strength Palmyra 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
49E	Arkport loamy fine sand, 25 to 35 percent slopes	Very limited	Arkport 90% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Dunkirk 8% Slope Frost action Slope direction and gradient Hillslope position Low strength Palmyra 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

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49F	Arkport loamy fine sand, 35 to 55 percent slopes	Very limited	Arkport 90% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Dunkirk 8% Slope Frost action Slope direction and gradient Hillslope position Low strength Palmyra 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
50B	Dunkirk-Arkport complex, 3 to 8 percent slopes	Very limited	Dunkirk 50% Frost action Hillslope position Low strength Slope shape across Collamer 5% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength
50C	Dunkirk-Arkport complex, 8 to 15 percent slopes	Very limited	Dunkirk 60% Frost action Hillslope position Slope direction and gradient Slope Low strength Collamer 5% Frost action Slope direction and gradient Slope Depth to saturated zone Hillslope position
50D	Dunkirk-Arkport complex, 15 to 25 percent slopes	Very limited	Dunkirk 60% Slope Frost action Slope direction and gradient Low strength Slope shape across Arkport 35% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Collamer 5% Slope Frost action Slope direction and gradient Depth to saturated zone Hillslope position

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53A	Lamson fine sandy loam, 0 to 3 percent slopes	Very limited	Lamson 90% Depth to saturated zone Frost action Lamson 5% Ponding Depth to saturated zone Frost action Slope shape across Canandaigua 3% Depth to saturated zone Frost action Low strength Slope shape across
54A	Lamson mucky fine sandy loam, 0 to 3 percent slopes	Very limited	Lamson 90% Ponding Depth to saturated zone Frost action Slope shape across Canandaigua 5% Depth to saturated zone Frost action Low strength Slope shape across Lamson 5% Depth to saturated zone Frost action
56A	Elnora loamy fine sand, 0 to 3 percent slopes	Somewhat limited	Elnora 90% Frost action Hillslope position Slope shape across Depth to saturated zone
58B	Colonie loamy fine sand, 3 to 8 percent slopes	Somewhat limited	Colonie 95% Hillslope position Slope shape across Elnora 5% Frost action Hillslope position Slope shape across Depth to saturated zone
58C	Colonie loamy fine sand, 8 to 15 percent slopes	Somewhat limited	Colonie 95% Hillslope position Slope direction and gradient Slope shape across Slope Elnora 5% Frost action Hillslope position Slope shape across Depth to saturated zone Slope direction and gradient

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62B	Mardin channery silt loam, 3 to 8 percent slopes	Somewhat limited	Mardin 85% Depth to saturated zone Frost action Hillslope position Slope shape across Lordstown 5% Frost action Hillslope position Slope shape across Slope direction and gradient Bath 5% Slope Slope direction and gradient Frost action Hillslope position Depth to saturated zone
62C	Mardin channery silt loam, 8 to 15 percent slopes	Somewhat limited	Mardin 88% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position
62D	Mardin channery silt loam, 15 to 25 percent slopes	Very limited	Mardin 85% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Lordstown 5% Slope Slope direction and gradient Frost action Hillslope position Volusia 5% Depth to saturated zone Frost action Slope Slope direction and gradient Bath 5% Slope Slope direction and gradient Frost action Hillslope position Depth to saturated zone

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62E	Mardin channery silt loam, 25 to 35 percent slopes	Very limited	Mardin 80% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Bath 8% Slope Slope direction and gradient Frost action Hillslope position Depth to saturated zone Lordstown, very stony 7% Slope Slope direction and gradient Frost action Hillslope position Volusia 5% Slope Depth to saturated zone Frost action Slope direction and gradient Hillslope position
63B	Langford channery silt loam, 3 to 8 percent slopes	Somewhat limited	Langford 85% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient Schuyler 5% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
63C	Langford channery silt loam, 8 to 15 percent slopes	Somewhat limited	Langford 85% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Chadakoin 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Schuyler 5% Depth to saturated zone Slope Slope direction and gradient Frost action Low strength

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Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
63D	Langford channery silt loam, 15 to 25 percent slopes	Very limited	Langford 80% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Erie 5% Depth to saturated zone Frost action Slope Slope direction and gradient Low strength Schuyler 5% Slope Depth to saturated zone Slope direction and gradient Frost action Low strength Towerville 5% Slope Slope direction and gradient Frost action Depth to saturated zone Low strength Chadakoin 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
64B	Langford-Erie channery silt loams, 3 to 8 percent slopes	Very limited	Erie 40% Depth to saturated zone Frost action Slope direction and gradient Low strength Chippewa 5% Depth to saturated zone Frost action Slope shape across Low strength Fremont 5% Depth to saturated zone Frost action Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
66A	Lyons soils, 0 to 3 percent slopes	Very limited	Lyons 75% Depth to saturated zone Frost action Slope shape across Lyons, frequently ponded 15% Ponding Depth to saturated zone Frost action Slope shape across Appleton 3% Depth to saturated zone Frost action Canandaigua 3% Depth to saturated zone Frost action Low strength Slope shape across Kendaia 2% Depth to saturated zone Frost action Palms, undrained 1% Ponding Depth to saturated zone Frost action Low strength Slope shape across Ilion 1% Depth to saturated zone Frost action Slope shape across
68A	Volusia channery silt loam, 0 to 3 percent slopes	Very limited	Volusia 90% Depth to saturated zone Frost action Chippewa 5% Depth to saturated zone Frost action Slope shape across Low strength
68B	Volusia channery silt loam, 3 to 8 percent slopes	Very limited	Volusia 90% Depth to saturated zone Frost action Chippewa 5% Depth to saturated zone Frost action Slope shape across Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
68C	Volusia channery silt loam, 8 to 15 percent slopes	Very limited	Volusia 90% Depth to saturated zone Frost action Slope Slope direction and gradient Mardin 6% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Chippewa 4% Depth to saturated zone Frost action Slope shape across Low strength
68D	Volusia channery silt loam, 15 to 25 percent slopes	Very limited	Volusia 90% Slope Depth to saturated zone Frost action Slope direction and gradient Hillslope position Mardin 7% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Chippewa 3% Depth to saturated zone Frost action Slope shape across Low strength
69A	Erie channery silt loam, 0 to 3 percent slopes	Very limited	Erie 80% Depth to saturated zone Frost action Low strength Chippewa 10% Depth to saturated zone Frost action Slope shape across Low strength Fremont 5% Depth to saturated zone Frost action Low strength
69B	Erie channery silt loam, 3 to 8 percent slopes	Very limited	Erie 80% Depth to saturated zone Frost action Slope direction and gradient Low strength Chippewa 5% Depth to saturated zone Frost action Slope shape across Low strength Fremont 5% Depth to saturated zone Frost action Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
69C	Erie channery silt loam, 8 to 15 percent slopes	Very limited	Erie 80% Depth to saturated zone Frost action Slope Slope direction and gradient Low strength Langford 10% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Fremont 5% Depth to saturated zone Frost action Slope Slope direction and gradient Low strength Chippewa 5% Depth to saturated zone Frost action Slope shape across Low strength
71A	Darien silt loam, 0 to 3 percent slopes	Very limited	Darien 95% Frost action Depth to saturated zone Low strength Iliion 4% Depth to saturated zone Frost action Low strength Slope shape across Angola 1% Frost action Depth to saturated zone Low strength
71B	Darien silt loam, 3 to 8 percent slopes	Very limited	Darien 95% Frost action Depth to saturated zone Low strength Iliion 4% Depth to saturated zone Frost action Low strength Slope shape across Angola 1% Frost action Depth to saturated zone Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
71C	Darien silt loam, 8 to 15 percent slopes	Very limited	Darien 95% Frost action Depth to saturated zone Slope Slope direction and gradient Low strength Ilion 4% Depth to saturated zone Frost action Low strength Slope shape across Slope direction and gradient Angola 1% Frost action Depth to saturated zone Low strength Slope direction and gradient Slope
72A	Darien-Ilion silt loams, 0 to 3 percent slopes	Very limited	Darien 68% Frost action Depth to saturated zone Slope shape across Low strength Ilion 27% Depth to saturated zone Frost action Low strength Slope shape across Angola 5% Frost action Depth to saturated zone Low strength
72B	Darien-Ilion silt loams, 3 to 8 percent slopes	Very limited	Darien 68% Frost action Depth to saturated zone Slope shape across Low strength Ilion 27% Depth to saturated zone Frost action Low strength Slope shape across Angola 5% Frost action Depth to saturated zone Low strength
73B	Greter silt loam, 3 to 8 percent slopes	Very limited	Greter 95% Frost action Depth to saturated zone Low strength Greter, poorly drained 5% Depth to saturated zone Frost action Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
73C	Gretor silt loam, 8 to 15 percent slopes	Very limited	Gretor 95% Frost action Depth to saturated zone Slope direction and gradient Slope Low strength Gretor, poorly drained 5% Depth to saturated zone Frost action Hillslope position Slope direction and gradient Low strength
73D	Gretor channery silt loam, 15 to 25 percent slopes	Very limited	Gretor 90% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength Mongaup, very stony 8% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Gretor, poorly drained 2% Depth to saturated zone Frost action Slope direction and gradient Low strength
76B	Orpark silt loam, 3 to 8 percent slopes	Very limited	Orpark 95% Frost action Depth to saturated zone Low strength Orpark, poorly drained 5% Depth to saturated zone Frost action Low strength
76C	Orpark silt loam, 8 to 15 percent slopes	Very limited	Orpark 95% Frost action Depth to saturated zone Slope direction and gradient Slope Low strength Orpark, poorly drained 5% Depth to saturated zone Frost action Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
76D	Orpark channery silt loam, 15 to 25 percent slopes	Very limited	Orpark 90% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength Orpark, poorly drained 5% Depth to saturated zone Frost action Low strength Lordstown, very stony 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
77A	Chippewa silt loam, 0 to 3 percent slopes	Very limited	Chippewa 85% Depth to saturated zone Frost action Slope shape across Low strength Chippewa, very poorly drained 10% Ponding Depth to saturated zone Frost action Slope shape across Low strength Volusia 5% Depth to saturated zone Frost action
77B	Chippewa silt loam, 3 to 8 percent slopes	Very limited	Chippewa 85% Depth to saturated zone Frost action Slope shape across Low strength Volusia 10% Depth to saturated zone Frost action Slope Slope direction and gradient Chippewa, very poorly drained 5% Ponding Depth to saturated zone Frost action Slope shape across Low strength
82B	Manlius channery silt loam, 3 to 8 percent slopes	Somewhat limited	Manlius 95% Frost action Hillslope position Slope shape across Slope direction and gradient
82C	Manlius channery silt loam, 8 to 15 percent slopes	Somewhat limited	Manlius 95% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
82D	Manlius channery silt loam, 15 to 25 percent slopes	Very limited	Manlius 95% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Arnot, very stony 4% Slope Slope direction and gradient Frost action Hillslope position Gretor 1% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength
91A	Palms muck, 0 to 3 percent slopes	Very limited	Palms, undrained 55% Ponding Depth to saturated zone Frost action Low strength Palms, drained 40% Depth to saturated zone Frost action Low strength Canandaigua 5% Ponding Depth to saturated zone Frost action Low strength Slope shape across
92A	Carlisle muck, 0 to 3 percent slopes	Very limited	Carlisle, undrained 45% Ponding Depth to saturated zone Frost action Low strength Slope shape across Carlisle, drained 40% Depth to saturated zone Frost action Low strength Slope shape across Palms, undrained 10% Ponding Depth to saturated zone Frost action Low strength Canandaigua 5% Ponding Depth to saturated zone Frost action Low strength Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
93A	Edwards muck, 0 to 3 percent slopes	Very limited	Edwards, undrained 50% Ponding Depth to saturated zone Frost action Low strength Slope shape across Edwards, drained 35% Depth to saturated zone Frost action Low strength Slope shape across Martisco, undrained 10% Ponding Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 5% Ponding Depth to saturated zone Frost action Low strength Slope shape across
94A	Martisco muck, 0 to 3 percent slopes	Very limited	Martisco, undrained 55% Ponding Depth to saturated zone Frost action Low strength Slope shape across Martisco, drained 35% Depth to saturated zone Frost action Low strength Slope shape across Canandaigua 5% Ponding Depth to saturated zone Frost action Low strength Slope shape across Palms, drained 5% Depth to saturated zone Frost action Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
95A	Saprists, 0 to 3 percent slopes, inundated	Very limited	Saprists, inundated 85% Ponding Depth to saturated zone Frost action Low strength Slope shape across Palms, undrained 5% Ponding Depth to saturated zone Frost action Low strength Fluvaquents, frequently flooded 5% Depth to saturated zone Frost action Flooding Slope shape across Carlisle, undrained 5% Ponding Depth to saturated zone Frost action Low strength Slope shape across
101A	Honeoye loam, 0 to 3 percent slopes	Somewhat limited	Honeoye 85% Frost action Hillslope position Slope shape across Lima 5% Frost action Depth to saturated zone Hillslope position Slope shape across Lansing 4% Frost action Hillslope position Slope shape across Wassaic 2% Frost action Hillslope position Slope shape across
101B	Honeoye loam, 3 to 8 percent slopes	Somewhat limited	Honeoye 85% Frost action Hillslope position Slope shape across Slope direction and gradient Lima 5% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient Lansing 4% Frost action Hillslope position Slope shape across Slope direction and gradient Wassaic 2% Frost action Hillslope position Slope shape across Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
101C	Honeoye loam, 8 to 15 percent slopes	Somewhat limited	Honeoye 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Lima 5% Slope Slope direction and gradient Frost action Depth to saturated zone Hillslope position Lansing 4% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Wassaic 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
101D	Honeoye loam, 15 to 25 percent slopes	Very limited	Honeoye 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Lima 5% Slope Slope direction and gradient Frost action Depth to saturated zone Hillslope position Lansing 4% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Kendaia 4% Depth to saturated zone Frost action Slope Slope direction and gradient Wassaic 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
101E	Honeoye loam, 25 to 35 percent slopes	Very limited	Honeoye 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Lima 5% Slope Slope direction and gradient Frost action Depth to saturated zone Hillslope position Kendaia 4% Depth to saturated zone Frost action Slope Slope direction and gradient Lansing 4% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Wassaic 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
104A	Honeoye loam, 0 to 3 percent slopes, lower clay surface	Somewhat limited	Honeoye, lower clay surface 85% Frost action Hillslope position Slope shape across Lima 5% Frost action Depth to saturated zone Hillslope position Slope shape across Lansing 4% Frost action Hillslope position Slope shape across Wassaic 2% Frost action Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
104B	Honeoye loam, 3 to 8 percent slopes, lower clay surface	Somewhat limited	Honeoye, lower clay surface 85% Frost action Hillslope position Slope shape across Slope direction and gradient Lima 5% Frost action Depth to saturated zone Hillslope position Slope shape across Slope direction and gradient Lansing 4% Frost action Hillslope position Slope shape across Slope direction and gradient Wassaic 2% Frost action Hillslope position Slope shape across Slope direction and gradient
104C	Honeoye loam, 8 to 15 percent slopes, lower clay surface	Somewhat limited	Honeoye, lower clay surface 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Lima 5% Slope Slope direction and gradient Frost action Depth to saturated zone Hillslope position Lansing 4% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Wassaic 2% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
106B	Danley-Lansing complex, 3 to 8 percent slopes	Somewhat limited	Danley 50% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength Lansing 45% Frost action Hillslope position Slope shape across Conesus 2% Frost action Depth to saturated zone Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
107B	Conesus-Lansing complex, 3 to 8 percent slopes	Somewhat limited	Conesus 50% Frost action Depth to saturated zone Hillslope position Slope shape across Lansing 45% Frost action Hillslope position Slope shape across Danley 1% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
108C	Lansing loam, 8 to 15 percent slopes	Somewhat limited	Lansing 85% Frost action Slope direction and gradient Slope Hillslope position Slope shape across Conesus 8% Frost action Slope direction and gradient Depth to saturated zone Slope Hillslope position Danley 1% Depth to saturated zone Frost action Slope direction and gradient Slope Hillslope position Wassaic 1% Frost action Slope direction and gradient Slope Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
108D	Lansing loam, 15 to 25 percent slopes	Very limited	Lansing 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Conesus 9% Slope Slope direction and gradient Frost action Depth to saturated zone Slope shape across Wassaic 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Kendaia 2% Depth to saturated zone Frost action Slope direction and gradient Slope Appleton 1% Depth to saturated zone Frost action Slope direction and gradient Slope
108E	Lansing loam, 25 to 35 percent slopes	Very limited	Lansing 85% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Cazenovia 10% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Aurora 5% Slope Frost action Depth to saturated zone Slope direction and gradient Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition

Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
112B	Ontario fine sandy loam, 3 to 8 percent slopes	Somewhat limited	Ontario 85% Frost action Hillslope position Slope shape across Honeoye 5% Frost action Hillslope position Slope shape across Hilton 5% Frost action Depth to saturated zone Slope shape across Hillslope position Cazenovia 3% Frost action Hillslope position Slope shape across Depth to saturated zone
112C	Ontario fine sandy loam, 8 to 15 percent slopes	Somewhat limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Hilton 5% Slope Slope direction and gradient Frost action Depth to saturated zone Slope shape across Cazenovia 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
112D	Ontario fine sandy loam, 15 to 25 percent slopes	Very limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cazenovia 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Appleton 2% Depth to saturated zone Frost action Slope Slope direction and gradient
112E	Ontario fine sandy loam, 25 to 35 percent slopes	Very limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cazenovia 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Appleton 2% Depth to saturated zone Frost action Slope Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
114B	Ontario gravelly loam, 3 to 8 percent slopes	Somewhat limited	Ontario 85% Frost action Hillslope position Slope shape across Slope direction and gradient Hilton 5% Frost action Depth to saturated zone Slope shape across Hillslope position Slope direction and gradient Honeoye 5% Frost action Hillslope position Slope shape across Slope direction and gradient Cazenovia 3% Frost action Hillslope position Slope shape across Slope direction and gradient Depth to saturated zone
114C	Ontario gravelly loam, 8 to 15 percent slopes	Somewhat limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Hilton 5% Slope Slope direction and gradient Frost action Depth to saturated zone Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cazenovia 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
114D	Ontario gravelly loam, 15 to 25 percent slopes	Very limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Appleton 2% Depth to saturated zone Frost action Slope Slope direction and gradient
116B	Ontario loam, 3 to 8 percent slopes	Somewhat limited	Ontario 85% Frost action Hillslope position Slope shape across Slope direction and gradient Honeoye 5% Frost action Hillslope position Slope shape across Slope direction and gradient Hilton 5% Frost action Depth to saturated zone Slope shape across Hillslope position Slope direction and gradient Cazenovia 3% Frost action Hillslope position Slope shape across Slope direction and gradient Depth to saturated zone

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
116C	Ontario loam, 8 to 15 percent slopes	Somewhat limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Hilton 5% Slope Slope direction and gradient Frost action Depth to saturated zone Slope shape across Cazenovia 3% Slope Slope direction and gradient Frost action Hillslope position Slope shape across
116D	Ontario loam, 15 to 25 percent slopes	Very limited	Ontario 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cazenovia 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Appleton 2% Depth to saturated zone Frost action Slope Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
118F	Ontario, Honeoye, and Lansing soils, 35 to 55 percent slopes	Very limited	Ontario 40% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Honeoye 35% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Lansing 20% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Aurora 5% Slope Frost action Depth to saturated zone Slope direction and gradient Hillslope position
120E	Palmyra and Howard soils, 25 to 45 percent slopes	Very limited	Palmyra 55% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Howard 40% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Colonie 5% Slope Slope direction and gradient Hillslope position Slope shape across
122A	Palmyra cobbly loam, 0 to 3 percent slopes	Somewhat limited	Palmyra 95% Frost action Hillslope position Slope shape across Honeoye, lower clay surface 5% Frost action Hillslope position Slope shape across
122B	Palmyra cobbly loam, 3 to 8 percent slopes	Somewhat limited	Palmyra 95% Frost action Hillslope position Slope shape across Honeoye, lower clay surface 5% Frost action Hillslope position Slope shape across Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
124A	Palmyra fine sandy loam, 0 to 3 percent slopes	Somewhat limited	Palmyra 90% Frost action Hillslope position Slope shape across Howard 10% Frost action Hillslope position Slope shape across
124B	Palmyra fine sandy loam, 3 to 8 percent slopes	Somewhat limited	Palmyra 90% Frost action Hillslope position Slope shape across Howard 10% Frost action Hillslope position Slope shape across
126A	Palmyra gravelly loam, 0 to 3 percent slopes	Somewhat limited	Palmyra 95% Frost action Hillslope position Slope shape across Arkport 5% Frost action Hillslope position Slope shape across
126B	Palmyra gravelly loam, 3 to 8 percent slopes	Somewhat limited	Palmyra 95% Frost action Hillslope position Slope shape across Slope direction and gradient Arkport 5% Frost action Hillslope position Slope shape across Slope direction and gradient
126C	Palmyra gravelly loam, 8 to 15 percent slopes	Somewhat limited	Palmyra 90% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Arkport 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
126D	Palmyra gravelly loam, 15 to 25 percent slopes	Very limited	Palmyra 90% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Arkport 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition

Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
128A	Palmyra gravelly sandy loam, 0 to 3 percent slopes	Somewhat limited	Palmyra 90% Frost action Hillslope position Slope shape across Arkport 10% Frost action Hillslope position Slope shape across
128B	Palmyra gravelly sandy loam, 3 to 8 percent slopes	Somewhat limited	Palmyra 90% Frost action Hillslope position Slope shape across Slope direction and gradient Arkport 10% Frost action Hillslope position Slope shape across Slope direction and gradient
128C	Palmyra gravelly sandy loam, 8 to 15 percent slopes	Somewhat limited	Palmyra 90% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Arkport 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
130A	Farmington loam, 0 to 3 percent slopes	Somewhat limited	Farmington 90% Frost action Hillslope position Slope shape across Nuhi 5% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
130B	Farmington loam, 3 to 8 percent slopes	Somewhat limited	Farmington 90% Frost action Hillslope position Slope shape across Nuhi 5% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
132A	Galoo loam, 0 to 3 percent slopes, rocky	Very limited	Galoo 95% Low strength Frost action Hillslope position Slope shape across Rock outcrop 1% Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
132B	Galoo loam, 3 to 8 percent slopes, rocky	Very limited	Galoo 95% Low strength Frost action Hillslope position Slope shape across Rock outcrop 1% Low strength
134A	Camillus silt loam, 0 to 3 percent slopes	Somewhat limited	Camillus 95% Frost action Hillslope position Slope shape across Low strength
134B	Camillus silt loam, 3 to 8 percent slopes	Somewhat limited	Camillus 95% Frost action Hillslope position Slope shape across Low strength
151C	Willdin-Norchip complex, 3 to 15 percent slopes	Somewhat limited	Willdin 60% Depth to saturated zone Frost action Slope direction and gradient Hillslope position
152B	Valois gravelly loam, 3 to 8 percent slopes	Somewhat limited	Valois 85% Frost action Hillslope position Slope shape across Slope direction and gradient Cadosia 5% Frost action Slope shape across Hillslope position Slope direction and gradient Mardin 5% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient
152C	Valois gravelly loam, 8 to 15 percent slopes	Somewhat limited	Valois 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Mardin 5% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Cadosia 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position

Solar Arrays, Ballast Anchor Systems

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Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
152D	Valois gravelly loam, 15 to 25 percent slopes	Very limited	Valois 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cadosia 6% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Mardin 6% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Volusia 3% Depth to saturated zone Frost action Slope Slope direction and gradient
152E	Valois gravelly loam, 25 to 35 percent slopes	Very limited	Valois 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Cadosia 6% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Mardin 6% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Towerville, extremely stony 3% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
153B	Valois gravelly loam, cool, 3 to 8 percent slopes	Somewhat limited	Valois, cool 85% Frost action Hillslope position Slope shape across Slope direction and gradient Rockrift 5% Frost action Slope shape across Hillslope position Slope direction and gradient Willdin 5% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient
153C	Valois gravelly loam, cool, 8 to 15 percent slopes	Somewhat limited	Valois, cool 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Rockrift 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 5% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position
153D	Valois gravelly loam, cool, 15 to 25 percent slopes	Very limited	Valois, cool 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Rockrift 6% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 6% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Ontusia 3% Depth to saturated zone Frost action Slope Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
153E	Valois gravelly loam, cool, 25 to 35 percent slopes	Very limited	Valois, cool 85% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Rockrft 6% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 6% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Ischua 3% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position
162B	Willdin channery silt loam, 3 to 8 percent slopes	Somewhat limited	Willdin 85% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient Lewbath 5% Slope Slope direction and gradient Frost action Hillslope position Depth to saturated zone Middlebrook 5% Depth to saturated zone Frost action Hillslope position Slope shape across
162C	Willdin channery silt loam, 8 to 15 percent slopes	Somewhat limited	Willdin 85% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Middlebrook 3% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
162D	Willdin channery silt loam, 15 to 25 percent slopes	Very limited	Willdin 80% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Lewbath 10% Slope Slope direction and gradient Frost action Hillslope position Depth to saturated zone Mongaup 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Ontusia 5% Depth to saturated zone Frost action Slope Slope direction and gradient
168A	Ontusia channery silt loam, 0 to 3 percent slopes	Very limited	Ontusia 88% Depth to saturated zone Frost action Norchip 5% Depth to saturated zone Frost action Slope shape across Low strength Gretor 2% Frost action Depth to saturated zone Low strength
168B	Ontusia channery silt loam, 3 to 8 percent slopes	Very limited	Ontusia 90% Depth to saturated zone Frost action Slope direction and gradient Norchip 5% Depth to saturated zone Frost action Slope shape across Low strength
168C	Ontusia channery silt loam, 8 to 15 percent slopes	Very limited	Ontusia 90% Depth to saturated zone Frost action Slope Slope direction and gradient Norchip 5% Depth to saturated zone Frost action Slope shape across Slope direction and gradient Low strength Willdin 5% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition

Tie-break Rule: Higher

Ontario County, New York

Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
168D	Ontusia channery silt loam, 15 to 25 percent slopes	Very limited	Ontusia 90% Slope Depth to saturated zone Frost action Slope direction and gradient Hillslope position Willdin 7% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Norchip 3% Depth to saturated zone Frost action Slope shape across Slope direction and gradient Low strength
171C	Lordstown-Manlius-Towerville complex, 8 to 15 percent slopes, very stony	Somewhat limited	Lordstown, very stony 40% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Towerville, very stony 20% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Manlius, very stony 20% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Cadosia, very stony 10% Slope Slope direction and gradient Frost action Hillslope position Mardin, very stony 5% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Arnot, very stony 5% Slope Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
171D	Lordstown-Manlius-Towerville complex, 15 to 25 percent slopes, very stony	Very limited	Lordstown, very stony 40% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Manlius, very stony 20% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Towerville, very stony 20% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Cadosia, very stony 10% Slope Slope direction and gradient Frost action Hillslope position Arnot, very stony 5% Slope Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
171E	Lordstown-Manlius-Towerville complex, 25 to 35 percent slopes, extremely stony	Very limited	Lordstown, extremely stony 40% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Towerville, extremely stony 20% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Manlius, extremely stony 20% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Cadosia, extremely stony 10% Slope Slope direction and gradient Frost action Hillslope position Arnot, very stony 5% Slope Slope direction and gradient Frost action Hillslope position Mardin, extremely stony 5% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
171F	Lordstown-Manlius-Towerville complex, 35 to 80 percent slopes, extremely stony	Very limited	Lordstown, extremely stony 40% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Towerville, extremely stony 20% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Manlius, extremely stony 20% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Arnot, extremely stony 10% Slope Slope direction and gradient Frost action Hillslope position Cadosia, extremely stony 10% Slope Slope direction and gradient Frost action Hillslope position
177A	Norchip silt loam, 0 to 3 percent slopes	Very limited	Norchip 85% Depth to saturated zone Frost action Slope shape across Low strength Norchip, very poorly drained 10% Ponding Depth to saturated zone Frost action Slope shape across Low strength Ontusia 5% Depth to saturated zone Frost action Slope direction and gradient
177B	Norchip silt loam, 3 to 8 percent slopes	Very limited	Norchip 85% Depth to saturated zone Frost action Slope shape across Slope direction and gradient Low strength Norchip, very poorly drained 10% Ponding Depth to saturated zone Frost action Slope shape across Low strength Ontusia 5% Depth to saturated zone Frost action Slope Slope direction and gradient

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
181B	Mongaup-Ischua complex, 3 to 8 percent slopes	Somewhat limited	Mongaup 45% Frost action Slope shape across Hillslope position Slope direction and gradient Ischua 40% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient Rockrift 10% Frost action Slope shape across Hillslope position Slope direction and gradient Willdin 3% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient
181C	Mongaup-Ischua complex, 8 to 15 percent slopes	Somewhat limited	Mongaup 45% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Ischua 40% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Rockrift 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 3% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
181D	Mongaup-Ischua complex, 15 to 25 percent slopes, very stony	Very limited	<p>Mongaup, very stony 45%</p> <ul style="list-style-type: none"> Slope Slope direction and gradient Frost action Slope shape across Hillslope position <p>Ischua, very stony 40%</p> <ul style="list-style-type: none"> Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position <p>Rockrift 10%</p> <ul style="list-style-type: none"> Slope Slope direction and gradient Frost action Slope shape across Hillslope position <p>Willdin 3%</p> <ul style="list-style-type: none"> Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position <p>Greter 2%</p> <ul style="list-style-type: none"> Slope Frost action Depth to saturated zone Slope direction and gradient Low strength
181E	Mongaup-Ischua complex, 25 to 35 percent slopes, extremely stony	Very limited	<p>Mongaup, extremely stony 45%</p> <ul style="list-style-type: none"> Slope Slope direction and gradient Frost action Slope shape across Hillslope position <p>Ischua, extremely stony 40%</p> <ul style="list-style-type: none"> Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position <p>Rockrift 10%</p> <ul style="list-style-type: none"> Slope Slope direction and gradient Frost action Slope shape across Hillslope position <p>Willdin 3%</p> <ul style="list-style-type: none"> Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position <p>Greter 2%</p> <ul style="list-style-type: none"> Slope Frost action Depth to saturated zone Slope direction and gradient Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
Survey Area Version and Date: 23 - 09/05/2023

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
182B	Mongaup channery loam, 3 to 8 percent slopes	Somewhat limited	Mongaup 75% Frost action Slope shape across Hillslope position Slope direction and gradient Rockrift 10% Frost action Slope shape across Hillslope position Slope direction and gradient Willdin 8% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient Ischua 5% Depth to saturated zone Frost action Hillslope position Slope shape across Slope direction and gradient
182C	Mongaup channery loam, 8 to 15 percent slopes	Somewhat limited	Mongaup 75% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Rockrift 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Willdin 8% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position Ischua 5% Depth to saturated zone Slope Slope direction and gradient Frost action Hillslope position
201A	Lima loam, 0 to 3 percent slopes	Somewhat limited	Lima 85% Frost action Depth to saturated zone Hillslope position Slope shape across Honeoye 5% Frost action Hillslope position Slope shape across Cazenovia 2% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
201B	Lima loam, 3 to 8 percent slopes	Somewhat limited	Lima 85% Frost action Depth to saturated zone Hillslope position Slope shape across Honeoye 6% Frost action Hillslope position Slope shape across Cazenovia 2% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
201C	Lima loam, 8 to 15 percent slopes	Somewhat limited	Lima 85% Frost action Slope direction and gradient Depth to saturated zone Slope Slope shape across Honeoye 7% Frost action Slope direction and gradient Slope Hillslope position Slope shape across Cazenovia 2% Depth to saturated zone Frost action Slope direction and gradient Slope Hillslope position
204A	Lima loam, 0 to 3 percent slopes, lower clay surface	Somewhat limited	Lima 85% Frost action Depth to saturated zone Hillslope position Slope shape across Honeoye 5% Frost action Hillslope position Slope shape across Cazenovia 2% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength

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Aggregation Method: Dominant Condition
Tie-break Rule: Higher

Ontario County, New York
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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
204B	Lima loam, 3 to 8 percent slopes, lower clay surface	Somewhat limited	Lima 85% Frost action Depth to saturated zone Hillslope position Slope shape across Honeoye 6% Frost action Hillslope position Slope shape across Cazenovia 2% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength
210A	Phelps gravelly silt loam, 0 to 3 percent slopes	Very limited	Phelps 85% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Homer 5% Frost action Depth to saturated zone
210B	Phelps gravelly silt loam, 3 to 8 percent slopes	Very limited	Phelps 85% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Homer 5% Frost action Depth to saturated zone
212A	Nuhi silt loam, 0 to 3 percent slopes	Somewhat limited	Nuhi 85% Depth to saturated zone Frost action Hillslope position Slope shape across Low strength Farmington 10% Frost action Hillslope position Slope shape across
240B	Aurora-Angola silt loams, 3 to 8 percent slopes	Very limited	Aurora 60% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Angola 30% Frost action Depth to saturated zone Low strength Darren 5% Frost action Depth to saturated zone Low strength

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Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
240C	Aurora-Angola silt loams, 8 to 15 percent slopes	Very limited	Aurora 60% Frost action Slope Depth to saturated zone Slope direction and gradient Hillslope position Angola 30% Frost action Depth to saturated zone Low strength Slope direction and gradient Slope Darien 5% Frost action Depth to saturated zone Slope Slope direction and gradient Low strength
240D	Aurora-Angola silt loams, 15 to 25 percent slopes	Very limited	Aurora 60% Slope Frost action Depth to saturated zone Slope direction and gradient Hillslope position Angola 30% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength Darien 5% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength Danley 5% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position
241B	Aurora silt loam, 3 to 8 percent slopes	Very limited	Aurora 85% Frost action Depth to saturated zone Hillslope position Slope shape across Low strength Angola 10% Frost action Depth to saturated zone Low strength

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Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
241C	Aurora silt loam, 8 to 15 percent slopes	Very limited	Aurora 85% Frost action Slope Depth to saturated zone Slope direction and gradient Hillslope position Angola 8% Frost action Depth to saturated zone Slope Slope direction and gradient Low strength
241D	Aurora silt loam, 15 to 25 percent slopes	Very limited	Aurora 85% Slope Frost action Depth to saturated zone Slope direction and gradient Hillslope position Danley 10% Slope Depth to saturated zone Slope direction and gradient Frost action Hillslope position Angola 5% Slope Frost action Depth to saturated zone Slope direction and gradient Low strength
255B	Cazenovia silt loam, 3 to 8 percent slopes	Somewhat limited	Cazenovia 85% Frost action Depth to saturated zone Low strength Hillslope position Slope shape across Cayuga 5% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across
255C	Cazenovia silt loam, 8 to 15 percent slopes	Somewhat limited	Cazenovia 85% Slope Slope direction and gradient Frost action Depth to saturated zone Low strength Cayuga 8% Low strength Slope Slope direction and gradient Frost action Hillslope position

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Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
255D	Cazenovia silt loam, 15 to 25 percent slopes	Very limited	Cazenovia 85% Slope Slope direction and gradient Frost action Depth to saturated zone Low strength Cayuga 10% Slope Low strength Slope direction and gradient Frost action Hillslope position Ovid 5% Frost action Depth to saturated zone Slope direction and gradient Slope Low strength
260B	Cayuga silt loam, 3 to 8 percent slopes	Somewhat limited	Cayuga 85% Low strength Frost action Depth to saturated zone Hillslope position Slope shape across
260C	Cayuga silt loam, 8 to 15 percent slopes	Somewhat limited	Cayuga 85% Low strength Frost action Hillslope position Depth to saturated zone Slope direction and gradient
260D	Cayuga silt loam, 15 to 25 percent slopes	Very limited	Cayuga 85% Slope Low strength Slope direction and gradient Frost action Hillslope position Lansing 10% Slope Slope direction and gradient Frost action Slope shape across Hillslope position Schoharie 5% Slope Low strength Slope direction and gradient Frost action Depth to saturated zone

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Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
304A	Kendaia loam, 0 to 3 percent slopes	Very limited	Kendaia 85% Depth to saturated zone Frost action Lyons 5% Depth to saturated zone Frost action Slope shape across Ovid 2% Frost action Depth to saturated zone Low strength Churchville 2% Depth to saturated zone Frost action Low strength
304B	Kendaia loam, 3 to 8 percent slopes	Very limited	Kendaia 85% Depth to saturated zone Frost action Lyons 4% Depth to saturated zone Frost action Slope shape across Churchville 2% Depth to saturated zone Frost action Low strength Ovid 2% Frost action Depth to saturated zone Low strength
342A	Angola silt loam, 0 to 3 percent slopes	Very limited	Angola 90% Frost action Depth to saturated zone Low strength Darrien 5% Frost action Depth to saturated zone Low strength Ilion 5% Depth to saturated zone Frost action Low strength Slope shape across
356A	Ovid silt loam, 0 to 3 percent slopes	Very limited	Ovid 85% Frost action Depth to saturated zone Low strength Odessa 10% Frost action Low strength Depth to saturated zone Lakemont 5% Depth to saturated zone Low strength Frost action Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
356B	Ovid silt loam, 3 to 8 percent slopes	Very limited	Ovid 85% Frost action Depth to saturated zone Low strength Odessa 10% Frost action Low strength Depth to saturated zone Lakemont 5% Depth to saturated zone Low strength Frost action Slope shape across
357B	Ovid silty clay loam, 3 to 8 percent slopes	Very limited	Ovid 85% Frost action Depth to saturated zone Low strength Odessa 10% Frost action Low strength Depth to saturated zone Lakemont 5% Depth to saturated zone Low strength Frost action Slope shape across
357C	Ovid silty clay loam, 8 to 15 percent slopes	Very limited	Ovid 85% Frost action Depth to saturated zone Slope direction and gradient Low strength Slope Odessa 10% Frost action Low strength Depth to saturated zone Slope direction and gradient Lakemont 5% Depth to saturated zone Low strength Frost action Slope shape across

Solar Arrays, Ballast Anchor Systems

Aggregation Method: Dominant Condition
Tie-break Rule: Higher

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Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
400A	Udorthents, loamy, 0 to 3 percent slopes	Somewhat limited	Udorthents, loamy 80% Frost action Hillslope position Howard 5% Frost action Hillslope position Slope shape across Ontario 5% Frost action Hillslope position Slope shape across Slope direction and gradient Palmyra 5% Frost action Hillslope position Slope shape across Lima 5% Frost action Depth to saturated zone Hillslope position Slope shape across
401D	Udorthents, refuse substratum. 0 to 25 percent slopes	Very limited	Udorthents, refuse substratum 90% Slope Slope direction and gradient Frost action Hillslope position Udorthents, Loamy 10% Slope Slope direction and gradient Frost action Hillslope position
PG	Pits, gravel and sand	Very limited	Pits, gravel and sand 75% Low strength Slope shape across Slope direction and gradient Palmyra 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Arkport 5% Slope Slope direction and gradient Frost action Slope shape across Hillslope position
PQ	Pits, quarry	Very limited	Pits, quarry 80% Low strength Slope Slope direction and gradient Farmington 5% Slope Slope direction and gradient Frost action Hillslope position Slope shape across Kendaia 5% Depth to saturated zone Frost action
W	Water	Not rated	Water 100%

Solar Arrays, Ballast Anchor Systems

Rating Options

Attribute Name: Solar Arrays, Ballast Anchor Systems

ENG - Engineering

Ground-based Solar Arrays, Ballast Anchor Systems

Ground-based solar arrays are sets of photovoltaic panels that are not situated on a building or pole. These installations consist of a racking system that holds the panel in the desired orientation and the foundation structures that hold the racking system to the ground. Two basic methods are used to hold the systems to the ground, based on site conditions and cost. One method employs driven piles, screw augers, or concrete piers that penetrate into the soil to provide a stable foundation. The ease of installation and general site suitability of soil-penetrating anchoring systems depends on soil characteristics such as rock fragment content, soil depth, soil strength, soil corrosivity, shrink-swell tendencies, and drainage. The other basic anchoring system utilizes precast ballasted footings or ballasted trays on the soil surface to make the arrays too heavy to move. The site considerations that impact both basic systems are slope, slope aspect, wind speed, land surface shape, flooding, and ponding. Other factors that will contribute to the function of a solar power array include daily hours of sunlight and shading from hills, trees, or buildings.

Ballast anchor systems can be used in some places where soil-penetrating systems cannot, such as in shallow or stony soil. Also, since they do not penetrate the soil, ballast systems can be used where the soil is contaminated and disturbance is to be avoided. The soil in the area must have sufficient strength to be able to support the vehicles that haul the ballast and the machinery to install it.

Soils can be a non-member, partial member or complete members of the set of soils that are limited for "Ground-based Solar Panel Arrays". If a soil's property within 150 cm (60 inches) of the soil surface has a membership indices greater than zero, then that soil property is limiting and the soil restrictive feature is identified. The overall interpretive rating assigned is the maximum membership indices of each soil interpretive property that comprise the "Ground-based Solar Panel Arrays" interpretive rule. Minor restrictive soil features are identified but not considered as part of the overall rating process. These restrictive features could be important factors where the major restrictive features are overcome through design application.

Soils are placed into interpretive rating classes per their rating indices. These are not limited (rating index = 0), somewhat limited (rating index greater than 0 and less than 1.0), or very limited (rating index = 1.0).

Numerical ratings indicate the degree of limitation. The ratings are shown in decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil has the least similarity to a good site (1.0) and the point at which the soil feature is very much like known good sites (0).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

References:

Canada, S. 2012. Corrosion impacts on steel piles. Solarpro. Solarprofessional.com.

Romanoff, Melvin. 1962. Corrosion of Steel Pilings in Soils. Journal of Research of the National Bureau of Standards. (Volume 66C, No. 3). July/September, 1962.

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value to represent the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. The components in the map unit name represent the major soils within a map unit delineation. Minor components make up the balance of the map unit. Great differences in soil properties can occur between map unit components and within short distances. Minor components may be very different from the major components. Such differences could significantly affect use and management of the map unit. Minor components may or may not be documented in the database. The results of aggregation do not reflect the presence or absence of limitations of the components which are not listed in the database. An on-site investigation is required to identify the location of individual map unit components.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that

Solar Arrays, Ballast Anchor Systems

the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be generated. Aggregation must be done because, on any soil map, map units are delineated but components are not.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.