

Hydric Soils

Hennepin County, Minnesota

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any column indicate that the data were not included in the database. Definitions of hydric criteria codes are included at the end of the report]

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D1B:					
Anoka and Zimmerman soils, terrace, 2 to 6 percent slopes	Anoka, terrace	55	Stream terraces	No	---
	Zimmerman, terrace	40	Stream terraces	No	---
	Kost	5	Stream terraces	No	---
D1C:					
Anoka and Zimmerman soils, terrace, 6 to 12 percent slopes	Anoka, terrace	45	Stream terraces	No	---
	Zimmerman, terrace	45	Stream terraces	No	---
	Kost	10	Stream terraces	No	---
D2A:					
Elkriver fine sandy loam, 0 to 2 percent slopes, rarely flooded	Elkriver, rarely flooded	85	Flood plains	No	---
	Mosford, rarely flooded	10	Flood plains	No	---
	Elkriver, occasionally flooded	5	Flood plains	No	---
D3A:					
Elkriver fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Elkriver, occasionally flooded	80	Flood plains	No	---
	Fordum, frequently flooded	15	Drainageways	Yes	2B3, 4
	Winterfield, occasionally flooded	5	Flood plains	No	---
D4A:					
Dorset sandy loam, 0 to 2 percent slopes	Dorset	90	Stream terraces	No	---
	Verndale, acid substratum	8	Stream terraces	No	---
	Almora	2	Stream terraces	No	---
D4B:					
Dorset sandy loam, 2 to 6 percent slopes	Dorset	85	Stream terraces	No	---
	Verndale, acid substratum	10	Stream terraces	No	---
	Almora	5	Stream terraces	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D4C:					
Dorset sandy loam, 6 to 12 percent slopes	Dorset	75	Stream terraces	No	---
	Verndale, acid substratum	15	Stream terraces	No	---
	Almora	10	Stream terraces	No	---
D5B:					
Dorset-Two Inlets complex, 2 to 6 percent slopes	Dorset	65	Stream terraces	No	---
	Two Inlets	25	Stream terraces	No	---
	Southhaven	5	Stream terraces	No	---
	Verndale, acid substratum	5	Stream terraces	No	---
D5C:					
Dorset-Two Inlets complex, 6 to 12 percent slopes	Dorset	55	Hills, Hills, Outwash plains, Stream terraces	No	---
	Two Inlets	30	Stream terraces	No	---
	Southhaven	10	Stream terraces	No	---
	Verndale, acid substratum	5	Stream terraces	No	---
D5D:					
Dorset-Two Inlets complex, 12 to 18 percent slopes	Dorset	50	Stream terraces	No	---
	Two Inlets	35	Stream terraces	No	---
	Southhaven	10	Stream terraces	No	---
	Verndale, acid substratum	5	Stream terraces	No	---
D6A:					
Verndale sandy loam, acid substratum, 0 to 2 percent slopes	Verndale, acid substratum	90	Stream terraces	No	---
	Dorset	7	Stream terraces	No	---
	Hubbard	3	Stream terraces	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D6B:					
Verndale sandy loam, acid substratum, 2 to 6 percent slopes	Verndale, acid substratum	85	Stream terraces	No	---
	Dorset	10	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
D6C:					
Verndale sandy loam, acid substratum, 6 to 12 percent slopes	Verndale, acid substratum	80	Stream terraces	No	---
	Dorset	15	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
D7A:					
Hubbard loamy sand, 0 to 2 percent slopes	Hubbard	95	Stream terraces	No	---
	Mosford	5	Stream terraces	No	---
D7B:					
Hubbard loamy sand, 2 to 6 percent slopes	Hubbard	90	Stream terraces	No	---
	Mosford	10	Stream terraces	No	---
D7C:					
Hubbard loamy sand, 6 to 12 percent slopes	Hubbard	80	Stream terraces	No	---
	Mosford	10	Stream terraces	No	---
	Sandberg	10	Stream terraces	No	---
D8B:					
Sandberg loamy coarse sand, 2 to 6 percent slopes	Sandberg	95	Stream terraces	No	---
	Arvilla, MAP>25	5	Stream terraces	No	---
D8C:					
Sandberg loamy coarse sand, 6 to 12 percent slopes	Sandberg	80	Stream terraces	No	---
	Corliss	15	Stream terraces	No	---
	Southhaven	5	Stream terraces	No	---

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D8D:					
Sandberg loamy coarse sand, 12 to 18 percent slopes	Sandberg	80	Stream terraces	No	---
	Corliss	10	Stream terraces	No	---
	Southhaven	10	Stream terraces	No	---
D8E:					
Sandberg loamy coarse sand, 18 to 35 percent slopes	Sandberg	80	Stream terraces	No	---
	Corliss	10	Stream terraces	No	---
	Southhaven	10	Stream terraces	No	---
D10A:					
Forada sandy loam, 0 to 2 percent slopes	Forada	95	Drainageways, Stream terraces	Yes	2B3
	Depressional soil	5	Depressions	Yes	2B3, 3
D11A:					
Lindaas silt loam, 0 to 2 percent slopes	Lindaas	80	Flats, Lake plains	Yes	2B3
	Depressional soil	10	Depressions	Yes	2B3, 3
	Lindaas, sandy substratum	10	Flats	Yes	2B3
D12B:					
Bygland silt loam, map >25, 2 to 6 percent slopes	Bygland, MAP>25	70	Lake plains	No	---
	Bygland, sandy substratum	15	Lake plains	No	---
	Lindaas	10	Swales	Yes	2B3
	Depressional soil	5	Depressions	Yes	2B3, 3
D12C2:					
Bygland silt loam, map >25, 6 to 12 percent slopes, eroded	Bygland, MAP>25	70	Lake plains	No	---
	Bygland, sandy substratum	15	Lake plains	No	---
	Lindaas	10	Swales	Yes	2B3
	Depressional soil	5	Depressions	Yes	2B3, 3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D13A:					
Langola loamy fine sand, terrace, 0 to 2 percent slopes	Langola, terrace	85	Stream terraces	No	---
	Duelm	10	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
D13B:					
Langola loamy fine sand, terrace, 2 to 6 percent slopes	Langola, terrace	85	Stream terraces	No	---
	Hubbard	10	Stream terraces	No	---
	Duelm	5	Stream terraces	No	---
D15A:					
Seelyeville-Markey complex, depressional, 0 to 1 percent slopes	Seelyeville, drained	65	Depressions, Stream terraces	Yes	1
	Markey, drained	25	Depressions, Stream terraces	Yes	1
	Mineral soil, drained	10	Depressions	Yes	2B3
D16A:					
Seelyeville and Markey soils, ponded, 0 to 1 percent slopes	Markey, ponded	45	Lake plains, Outwash plains, Stream terraces	Yes	1, 3
	Seelyeville, ponded	45	Lake plains, Outwash plains, Stream terraces	Yes	1, 3
	Very poorly drained mineral soil, ponded	10	Lake plains, Outwash plains, Stream terraces	Yes	2B3, 3
D17A:					
Duelm loamy sand, 0 to 2 percent slopes	Duelm	90	Stream terraces	No	---
	Isan	8	Swales	Yes	2B3
	Hubbard	2	Stream terraces	No	---
D18B:					
Braham loamy fine sand, terrace, 2 to 5 percent slopes	Braham, terrace	85	Stream terraces	No	---
	Duelm	15	Stream terraces	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D19A:					
Fordum-Winterfield complex, 0 to 2 percent slopes, frequently flooded	Fordum, frequently flooded	65	Flood plains	Yes	2B3, 4
	Winterfield, frequently flooded	25	Flood plains	No	---
	Fordum, occasionally flooded	10	Flood plains	Yes	2B3
D20A:					
Isan sandy loam, 0 to 2 percent slopes	Isan	85	Stream terraces, Swales	Yes	2B3
	Isan, depressional	10	Depressions	Yes	2B3, 3
	Duelm	5	Stream terraces	No	---
D21A:					
Isan sandy loam, depressional, 0 to 1 percent slopes	Isan, depressional	85	Depressions, Stream terraces	Yes	2B3, 3
	Isan	15	Swales	Yes	2B3
D23A:					
Southhaven loam, 0 to 2 percent slopes	Southhaven	90	Stream terraces	No	---
	Dorset	5	Stream terraces	No	---
	Mosford	5	Stream terraces	No	---
D24A:					
Sedgeville loam, 0 to 2 percent slopes, occasionally flooded	Sedgeville, occasionally flooded	85	Flood plains, Swales	Yes	2B3
	Elkriver, occasionally flooded	15	Flood plains	No	---
D25A:					
Soderville loamy fine sand, terrace, 0 to 3 percent slopes	Soderville, terrace	90	Stream terraces	No	---
	Forada	10	Swales	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
D26A:					
Foldahl loamy sand, map >25, 0 to 3 percent slopes	Foldahl, MAP>25	90	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
	Isan	5	Swales	Yes	2B3
D27A:					
Dorset sandy loam, loamy substratum, 0 to 2 percent slopes	Dorset, loamy substratum	80	Stream terraces	No	---
	Dorset	15	Stream terraces	No	---
	Southhaven	5	Stream terraces	No	---
D28B:					
Urban land-Bygland, map >25, complex, 1 to 6 percent slopes	Urban land	75	Lake plains		---
	Bygland, MAP>25	20	Lake plains	No	---
	Bygland, sandy substratum	5	Lake plains	No	---
D29B:					
Urban land-Hubbard, bedrock substratum complex, 0 to 8 percent slopes	Urban land	70	Stream terraces		---
	Hubbard, bedrock substratum	20	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
	Mosford	5	Stream terraces	No	---
D30A:					
Seelyeville and Markey soils, depressional, 0 to 1 percent slopes	Markey, surface drained	45	Depressions, Stream terraces	Yes	1, 3
	Seelyeville, surface drained	45	Depressions, Stream terraces	Yes	1, 3
	Mineral soil, surface drained	10	Depressions	Yes	2B3, 3

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D31A:					
Urban land-Duelm complex, 0 to 2 percent slopes	Urban land	70	Stream terraces		---
	Duelm	20	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
	Isan	5	Swales	Yes	2B3
D33B:					
Urban land-Dorset complex, 0 to 8 percent slopes	Urban land	70	Stream terraces		---
	Dorset	20	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
	Verndale, acid substratum	5	Stream terraces	No	---
D33C:					
Urban land-Dorset complex, 8 to 18 percent slopes	Urban land	70	Stream terraces		---
	Dorset	20	Stream terraces	No	---
	Hubbard	5	Stream terraces	No	---
	Verndale, acid substratum	5	Stream terraces	No	---
D34B:					
Urban land-Hubbard complex, 0 to 8 percent slopes	Urban land	75	Stream terraces		---
	Hubbard	20	Stream terraces	No	---
	Mosford	5	Stream terraces	No	---
D35A:					
Elkriver-Fordum complex, 0 to 2 percent slopes, occasionally flooded	Elkriver, occasionally flooded	70	Benches, Flood plains	No	---
	Fordum, occasionally flooded	20	Drainageways	Yes	2B3
	Udipsammments	5	Flood plains		---
	Winterfield, occasionally flooded	5	Flood plains	No	---

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D37F:					
Dorset, bedrock substratum-Rock outcrop complex, 25 to 65 percent slopes	Dorset, bedrock substratum	70	Stream terraces	No	---
	Rock outcrop	20	Stream terraces	No	---
	Hubbard, bedrock substratum	10	Stream terraces	No	---
D40A:					
Kratka loamy fine sand, thick solum, 0 to 2 percent slopes	Kratka, thick solum	80	Stream terraces, Swales	Yes	2B2
	Duelm	10	Stream terraces	No	---
	Foldahl, MAP>25	10	Stream terraces	No	---
D41C:					
Urban land-Waukon complex, 6 to 18 percent slopes	Urban land	75	Stream terraces		---
	Waukon	20	Stream terraces	No	---
	Braham	5	Stream terraces	No	---
D43A:					
Gonvick loam, terrace, 1 to 3 percent slopes	Gonvick, terrace	85	Stream terraces	No	---
	Braham	15	Stream terraces	No	---
GP:					
Pits, gravel-Udipsammets complex	Pits, gravel	80	Moraines, Outwash plains, Stream terraces		---
	Udipsammets	20	Moraines, Outwash plains, Stream terraces		---
L2B:					
Malardi-Hawick complex, 1 to 6 percent slopes	Malardi	65	Outwash plains	No	---
	Hawick	25	Outwash plains	No	---
	Eden Prairie	5	Outwash plains	No	---
	Rasset	5	Outwash plains	No	---

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L2C:					
Malardi-Hawick complex, 6 to 12 percent slopes	Malardi	60	Outwash plains	No	---
	Hawick	25	Outwash plains	No	---
	Tomall	10	Outwash plains	No	---
	Crowfork	5	Outwash plains	No	---
L2D:					
Malardi-Hawick complex, 12 to 18 percent slopes	Malardi	55	Outwash plains	No	---
	Hawick	30	Outwash plains	No	---
	Tomall	10	Outwash plains	No	---
	Crowfork	5	Outwash plains	No	---
L2E:					
Malardi-Hawick complex, 18 to 35 percent slopes	Malardi	55	Outwash plains	No	---
	Hawick	30	Outwash plains	No	---
	Tomall	15	Outwash plains	No	---
L3A:					
Rasset sandy loam, 0 to 2 percent slopes	Rasset	90	Outwash plains	No	---
	Malardi	8	Outwash plains	No	---
	Eden Prairie	2	Outwash plains	No	---
L3B:					
Rasset sandy loam, 2 to 6 percent slopes	Rasset	80	Outwash plains	No	---
	Malardi	15	Outwash plains	No	---
	Eden Prairie	5	Outwash plains	No	---

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L3C:					
Rasset sandy loam, 6 to 12 percent slopes	Rasset	75	Outwash plains	No	---
	Malardi	10	Outwash plains	No	---
	Tomall	10	Outwash plains	No	---
	Eden Prairie	5	Outwash plains	No	---
L4B:					
Crowfork loamy sand, 1 to 6 percent slopes	Crowfork	90	Outwash plains	No	---
	Eden Prairie	10	Outwash plains	No	---
L4C:					
Crowfork loamy sand, 6 to 12 percent slopes	Crowfork	90	Outwash plains	No	---
	Eden Prairie	10	Outwash plains	No	---
L4D:					
Crowfork loamy sand, 12 to 18 percent slopes	Crowfork	85	Outwash plains	No	---
	Eden Prairie	15	Outwash plains	No	---
L6A:					
Biscay loam, 0 to 2 percent slopes	Biscay	85	Swales	Yes	2B3
	Biscay, depressional	8	Depressions, Outwash plains	Yes	2B3
	Mayer	5	Rims	Yes	2B3
	Cylinder	2	Outwash plains		---
L7A:					
Biscay loam, depressional, 0 to 1 percent slopes	Biscay, depressional	80	Depressions, Outwash plains	Yes	2B3
	Biscay	15	Drainageways	Yes	2B3
	Mayer	5	Rims	Yes	2B3

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L8A:					
Darfur sandy loam, 0 to 2 percent slopes	Darfur	95	Drainageways, Outwash plains	Yes	2B3
	Dassel	5	Depressions	Yes	2B3, 3
L9A:					
Minnetonka silty clay loam, 0 to 2 percent slopes	Minnetonka	90	Flats, Lake plains	Yes	2B3
	Depressional soil	10	Depressions	Yes	2B3, 3
L10B:					
Kasota silty clay loam, 1 to 6 percent slopes	Kasota	80	Stream terraces	No	---
	Eden Prairie	10	Stream terraces	No	---
	Wet swale soil	10	Swales	Yes	2B3
L11B:					
Grays very fine sandy loam, 2 to 8 percent slopes	Grays	90	Outwash plains	No	---
	Crowfork	5	Outwash plains	No	---
	Kasota	5	Outwash plains	No	---
L12A:					
Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes, frequently flooded	Blue Earth, frequently flooded	30	Flood plains, Marshes	Yes	2B3, 3, 4
	Houghton, frequently flooded	30	Flood plains, Marshes	Yes	1, 3, 4
	Muskego, frequently flooded	30	Flood plains, Marshes	Yes	1, 3, 4
	Oshawa, frequently flooded	10	Oxbows	Yes	2B3, 3, 4
L13A:					
Klossner muck, depressional, 0 to 1 percent slopes	Klossner, drained	80	Depressions, Moraines	Yes	1
	Mineral soil, drained	15	Depressions	Yes	2B3
	Houghton, drained	5	Depressions	Yes	1

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L14A:					
Houghton muck, depression, 0 to 1 percent slopes	Houghton, drained	80	Depressions, Moraines	Yes	1
	Klossner, drained	10	Depressions	Yes	1
	Mineral soil, drained	10	Depressions	Yes	2B3
L15A:					
Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes	Glencoe, ponded	30	Marshes, Moraines	Yes	2B3, 3
	Klossner, ponded	30	Marshes, Moraines	Yes	1, 3
	Okoboji, ponded	30	Marshes, Moraines	Yes	2B3, 3
	Houghton, ponded	10	Marshes	Yes	1, 3
L16A:					
Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes	Blue Earth, ponded	30	Marshes, Moraines	Yes	2B3, 3
	Houghton, ponded	30	Marshes, Moraines	Yes	1, 3
	Muskego, ponded	30	Marshes, Moraines	Yes	1, 3
	Klossner, ponded	10	Marshes	Yes	1, 3
L17B:					
Angus-Malardi complex, 2 to 6 percent slopes	Angus	50	Moraines	No	---
	Malardi	30	Moraines	No	---
	Cordova	10	Drainageways	Yes	2B3
	Moon	10	Moraines	No	---
L18A:					
Shields silty clay loam, 0 to 3 percent slopes	Shields	85	Moraines	No	---
	Lerdal	10	Moraines	No	---
	Mazaska	5	Swales	Yes	2B3
L19B:					
Moon loamy fine sand, 2 to 5 percent slopes	Moon	85	Moraines	No	---
	Finchford	15	Moraines	No	---

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L20B:					
Fedji loamy fine sand, silty substratum, 2 to 8 percent slopes	Fedji, silty substratum	85	Moraines	No	---
	Finchford	15	Moraines	No	---
L21A:					
Canisteo loam, 0 to 2 percent slopes	Canisteo	80	Flats, Moraines	Yes	2B3
	Cordova	15	Drainageways	Yes	2B3
	Glencoe	5	Depressions	Yes	2B3, 3
L22C2:					
Lester loam, morainic, 6 to 12 percent slopes, eroded	Lester, eroded	70	Moraines	No	---
	Angus	15	Moraines	No	---
	Terril	12	Moraines	No	---
	Hamel	3	Drainageways	Yes	2B3
L22D2:					
Lester loam, morainic, 12 to 18 percent slopes, eroded	Lester, eroded	80	Moraines	No	---
	Terril	10	Moraines	No	---
	Hamel	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---
L22E:					
Lester loam, morainic, 18 to 25 percent slopes	Lester, morainic	75	Moraines	No	---
	Terril	15	Moraines	No	---
	Hamel	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---

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L22F:					
Lester loam, morainic, 25 to 35 percent slopes	Lester, morainic	75	Moraines	No	---
	Ridgeton	10	Moraines	No	---
	Terril	10	Moraines	No	---
	Hamel	5	Toes	Yes	2B3
L23A:					
Cordova loam, 0 to 2 percent slopes	Cordova	85	Drainageways, Moraines	Yes	2B3
	Glencoe, depressional	10	Depressions	Yes	2B3, 3
	Nessel	5	Moraines	No	---
L24A:					
Glencoe loam, depressional, 0 to 1 percent slopes	Glencoe, depressional	90	Depressions, Moraines	Yes	2B3, 3
	Cordova	10	Drainageways	Yes	2B3
L25A:					
Le Sueur loam, 1 to 3 percent slopes	Le Sueur	80	Moraines	No	---
	Cordova	15	Drainageways	Yes	2B3
	Angus	5	Moraines	No	---
L26A:					
Shorewood silty clay loam, 0 to 3 percent slopes	Shorewood	85	Lake plains	No	---
	Minnetonka	10	Drainageways	Yes	2B3
	Good Thunder	5	Lake plains	No	---
L26B:					
Shorewood silty clay loam, 3 to 6 percent slopes	Shorewood	90	Lake plains	No	---
	Good Thunder	5	Lake plains	No	---
	Minnetonka	5	Drainageways	Yes	2B3

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L26C2:					
Shorewood silty clay loam, 6 to 12 percent slopes, eroded	Shorewood, eroded	95	Lake plains	No	---
	Minnetonka	5	Drainageways	Yes	2B3
L27A:					
Suckercreek loam, 0 to 2 percent slopes, frequently flooded	Suckercreek, frequently flooded	85	Drainageways, Flood plains	Yes	2B3, 4
	Suckercreek, occasionally flooded	10	Alluvial flats	Yes	2B3
	Hanlon, occasionally flooded	5	Flood plains	No	---
L28A:					
Suckercreek fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Suckercreek, occasionally flooded	80	Alluvial flats, Flood plains	Yes	2B3
	Hanlon, occasionally flooded	10	Flood plains	No	---
	Suckercreek, frequently flooded	10	Drainageways	Yes	2B3, 4
L29A:					
Hanlon fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Hanlon, occasionally flooded	80	Flood plains	No	---
	Suckercreek, frequently flooded	10	Drainageways	Yes	2B3, 4
	Suckercreek, occasionally flooded	10	Alluvial flats	Yes	2B3
L30A:					
Medo soils, depressional, 0 to 1 percent slopes	Medo, surface drained	65	Depressions, Outwash plains	Yes	1, 3
	Medo, drained	20	Depressions, Outwash plains	Yes	1
	Mineral soil, drained	15	Depressions	Yes	2B3

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L31A:					
Medo, Dassel, and Biscay soils, ponded, 0 to 1 percent slopes	Biscay, ponded	30	Marshes, Outwash plains	Yes	2B3, 3
	Dassel, ponded	30	Marshes, Outwash plains	Yes	2B3, 3
	Medo, ponded	30	Marshes, Outwash plains	Yes	1, 3
	Houghton, ponded	5	Marshes	Yes	1, 3
	Muskego, ponded	5	Marshes	Yes	1, 3
L32D:					
Hawick loamy sand, 12 to 18 percent slopes	Hawick	75	Outwash plains	No	---
	Crowfork	15	Outwash plains	No	---
	Tomall	10	Outwash plains	No	---
L32F:					
Hawick loamy sand, 18 to 40 percent slopes	Hawick	75	Outwash plains	No	---
	Crowfork	15	Outwash plains	No	---
	Tomall	10	Outwash plains	No	---
L35A:					
Lerdal loam, 1 to 3 percent slopes	Lerdal	80	Moraines	No	---
	Mazaska	10	Swales	Yes	2B3
	Cordova	5	Swales	Yes	2B3
	Le Sueur	5	Moraines	No	---
L36A:					
Hamel, overwash-Hamel complex, 1 to 4 percent slopes	Hamel, overwash	50	Moraines	No	---
	Hamel	43	Drainageways, Moraines	Yes	2B3
	Terril	5	Moraines	No	---
	Glencoe	2	Depressions	Yes	2B3, 3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L37B:					
Angus loam, morainic, 2 to 5 percent slopes	Angus, morainic	80	Moraines	No	---
	Angus, eroded	10	Moraines	No	---
	Cordova	5	Drainageways	Yes	2B3
	Le Sueur	5	Moraines	No	---
L38A:					
Rushriver very fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Rushriver, occasionally flooded	75	Flood plains, Swales	Yes	2B3
	Oshawa, frequently flooded	15	Oxbows	Yes	2B3, 3, 4
	Alganssee, occasionally flooded	5	Flood plains	No	---
	Minneiska, occasionally flooded	5	Flood plains	No	---
L39A:					
Minneiska fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Minneiska, occasionally flooded	70	Flood plains	No	---
	Rushriver, occasionally flooded	15	Swales	Yes	2B3
	Oshawa, frequently flooded	10	Oxbows	Yes	2B3, 3, 4
	Alganssee, occasionally flooded	5	Flood plains	No	---
L40B:					
Angus-Kilkenny complex, 2 to 6 percent slopes	Angus	45	Moraines	No	---
	Kilkenny	40	Moraines	No	---
	Lerdal	10	Moraines	No	---
	Mazaska	5	Swales	Yes	2B3

Hydric Soils

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L41C2:					
Lester-Kilkenny complex, 6 to 12 percent slopes, eroded	Lester, eroded	45	Moraines	No	---
	Kilkenny, eroded	40	Moraines	No	---
	Terril	10	Moraines	No	---
	Derrynane	5	Drainageways	Yes	2B3
L41D2:					
Lester-Kilkenny complex, 12 to 18 percent slopes, eroded	Lester, eroded	45	Moraines	No	---
	Kilkenny, eroded	35	Moraines	No	---
	Terril	10	Moraines	No	---
	Derrynane	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---
L41E:					
Lester-Kilkenny complex, 18 to 25 percent slopes	Lester	45	Moraines	No	---
	Kilkenny	40	Moraines	No	---
	Derrynane	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---
	Terril	5	Moraines	No	---
L41F:					
Lester-Kilkenny complex, 25 to 35 percent slopes	Lester	45	Moraines	No	---
	Kilkenny	35	Moraines	No	---
	Ridgeton	10	Moraines	No	---
	Derrynane	5	Toes	Yes	2B3
	Terril	5	Moraines	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L42B:					
Kingsley-Gotham complex, 2 to 6 percent slopes	Kingsley	70	Moraines	No	---
	Gotham	25	Moraines	No	---
	Grays	5	Moraines	No	---
L42C:					
Kingsley-Gotham complex, 6 to 12 percent slopes	Kingsley	70	Moraines	No	---
	Gotham	25	Moraines	No	---
	Grays	5	Moraines	No	---
L42D:					
Kingsley-Gotham complex, 12 to 18 percent slopes	Kingsley	70	Moraines	No	---
	Gotham	25	Moraines	No	---
	Grays	5	Moraines	No	---
L42E:					
Kingsley-Gotham complex, 18 to 25 percent slopes	Kingsley	70	Moraines	No	---
	Gotham	25	Moraines	No	---
	Grays	5	Moraines	No	---
L42F:					
Kingsley-Gotham complex, 25 to 35 percent slopes	Kingsley	70	Moraines	No	---
	Gotham	25	Moraines	No	---
	Grays	5	Moraines	No	---
L43A:					
Brouillett loam, 0 to 2 percent slopes, occasionally flooded	Brouillett, occasionally flooded	80	Flood plains	No	---
	Minneiska, occasionally flooded	10	Flood plains	No	---
	Rushriver, occasionally flooded	10	Swales	Yes	2B3

Hydric Soils

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L44A:					
Nessel loam, 1 to 3 percent slopes	Nessel	85	Moraines	No	---
	Cordova	10	Drainageways	Yes	2B3
	Angus	5	Moraines	No	---
L45A:					
Dundas-Cordova complex, 0 to 3 percent slopes	Dundas	65	Moraines	No	---
	Cordova	25	Drainageways, Moraines	Yes	2B3
	Glencoe	5	Depressions	Yes	2B3, 3
	Nessel	5	Moraines	No	---
L46A:					
Tomall loam, 0 to 2 percent slopes	Tomall	80	Outwash plains	No	---
	Malardi	10	Outwash plains	No	---
	Rasset	10	Outwash plains	No	---
L47A:					
Eden Prairie sandy loam, 0 to 2 percent slopes	Eden Prairie	85	Outwash plains	No	---
	Malardi	10	Outwash plains	No	---
	Rasset	5	Outwash plains	No	---
L47B:					
Eden Prairie sandy loam, 2 to 6 percent slopes	Eden Prairie	80	Outwash plains	No	---
	Malardi	10	Outwash plains	No	---
	Rasset	10	Outwash plains	No	---
L47C:					
Eden Prairie sandy loam, 6 to 12 percent slopes	Eden Prairie	70	Outwash plains	No	---
	Hawick	10	Outwash plains	No	---
	Malardi	10	Outwash plains	No	---
	Rasset	10	Outwash plains	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L49A:					
Klossner soils, depressional, 0 to 1 percent slopes	Klossner, surface drained	65	Depressions, Moraines	Yes	1, 3
	Klossner, drained	20	Depressions, Moraines	Yes	1
	Mineral soil, drained	15	Depressions	Yes	2B3
L50A:					
Houghton and Muskego soils, depressional, 0 to 1 percent slopes	Houghton, surface drained	40	Depressions, Moraines	Yes	1, 3
	Muskego, surface drained	40	Depressions, Moraines	Yes	1, 3
	Klossner, drained	10	Depressions	Yes	1
	Mineral soil, drained	10	Depressions	Yes	2B3
L52C:					
Urban land-Lester complex, 2 to 18 percent slopes	Urban land	75	Moraines		---
	Lester	20	Moraines	No	---
	Kingsley	5	Moraines	No	---
L52E:					
Urban land-Lester complex, 18 to 35 percent slopes	Urban land	75	Moraines		---
	Lester	20	Moraines	No	---
	Kingsley	5	Moraines	No	---
L53B:					
Urban land-Moon complex, 2 to 8 percent slopes	Urban land	70	Moraines		---
	Moon	20	Moraines	No	---
	Lester	10	Moraines	No	---
L54A:					
Urban land-Dundas complex, 0 to 3 percent slopes	Urban land	70	Moraines		---
	Dundas	20	Moraines	No	---
	Nessel	10	Moraines	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L55B:					
Urban land-Malardi complex, 0 to 8 percent slopes	Urban land	70	Outwash plains		---
	Malardi	20	Outwash plains	No	---
	Eden Prairie	5	Outwash plains	No	---
	Rasset	5	Outwash plains	No	---
L55C:					
Urban land-Malardi complex, 8 to 18 percent slopes	Urban land	70	Outwash plains		---
	Malardi	20	Outwash plains	No	---
	Crowfork	5	Outwash plains	No	---
	Hawick	5	Outwash plains	No	---
L56A:					
Muskego and Klossner soils, 0 to 1 percent slopes, frequently flooded	Klossner, frequently flooded	45	Flats, Flood plains	Yes	1, 3, 4
	Muskego, frequently flooded	45	Flats, Flood plains	Yes	1, 3, 4
	Suckercreek, frequently flooded	10	Alluvial flats	Yes	2B3, 4
L58B:					
Koronis-Kingsley complex, 2 to 6 percent slopes	Koronis	60	Moraines	No	---
	Kingsley	25	Moraines	No	---
	Forestcity	10	Drainageways	Yes	2B3
	Gotham	5	Moraines	No	---
L58C2:					
Koronis-Kingsley complex, 6 to 12 percent slopes, eroded	Koronis, eroded	55	Moraines	No	---
	Kingsley, eroded	25	Moraines	No	---
	Forestcity	15	Drainageways	Yes	2B3
	Gotham	5	Moraines	No	---

Hydric Soils

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L58D2:					
Koronis-Kingsley complex, 12 to 18 percent slopes, eroded	Koronis, eroded	55	Moraines	No	---
	Kingsley, eroded	25	Moraines	No	---
	Forestcity	15	Drainageways	Yes	2B3
	Gotham	5	Moraines	No	---
L58E:					
Koronis-Kingsley complex, 18 to 25 percent slopes	Koronis	55	Moraines	No	---
	Kingsley	25	Moraines	No	---
	Forestcity	15	Drainageways	Yes	2B3
	Gotham	5	Moraines	No	---
L59A:					
Forestcity-Lundlake, depressional, complex, 0 to 3 percent slopes	Forestcity	70	Drainageways, Moraines	Yes	2B3
	Lundlake, depressional	25	Depressions, Moraines	Yes	2B3
	Marcellon	5	Moraines	No	---
L60B:					
Angus-Moon complex, 2 to 5 percent slopes	Angus	65	Moraines	No	---
	Moon	30	Moraines	No	---
	Hamel	5	Drainageways	Yes	2B3
L61C2:					
Lester-Metea complex, 6 to 12 percent slopes, eroded	Lester, eroded	60	Moraines	No	---
	Metea, eroded	25	Moraines	No	---
	Terril	12	Moraines	No	---
	Hamel	3	Drainageways	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L61D2:					
Lester-Metea complex, 12 to 18 percent slopes, eroded	Lester, eroded	55	Moraines	No	---
	Metea, eroded	25	Moraines	No	---
	Terril	12	Moraines	No	---
	Ridgeton	5	Moraines	No	---
	Hamel	3	Drainageways	Yes	2B3
L61E:					
Lester-Metea complex, 18 to 25 percent slopes	Lester	55	Moraines	No	---
	Metea	25	Moraines	No	---
	Terril	10	Moraines	No	---
	Hamel	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---
L62B:					
Koronis-Kingsley-Malardi complex, 2 to 6 percent slopes	Koronis	55	Moraines	No	---
	Kingsley	20	Moraines	No	---
	Malardi	20	Moraines	No	---
	Forestcity	5	Drainageways	Yes	2B3
L62C2:					
Koronis-Kingsley-Malardi complex, 6 to 12 percent slopes, eroded	Koronis, eroded	40	Moraines	No	---
	Kingsley, eroded	25	Moraines	No	---
	Malardi, eroded	25	Moraines	No	---
	Forestcity	10	Drainageways	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L62D2:					
Koronis-Kingsley-Malardi complex, 12 to 18 percent slopes, eroded	Koronis, eroded	40	Moraines	No	---
	Kingsley, eroded	25	Moraines	No	---
	Malardi, eroded	25	Moraines	No	---
	Forestcity	10	Drainageways	Yes	2B3
L62E:					
Koronis-Kingsley-Malardi complex, 18 to 35 percent slopes	Koronis	40	Moraines	No	---
	Kingsley	25	Moraines	No	---
	Malardi	25	Moraines	No	---
	Forestcity	10	Drainageways	Yes	2B3
L64A:					
Tadkee-Tadkee, depressional, complex, 0 to 2 percent slopes	Tadkee	50	Beaches, Moraines	Yes	2B2
	Tadkee, depressional	36	Beaches, Moraines, Shores	Yes	2B3, 3
	Better drained soil	8	Moraines	No	---
	Granby	4	Shores	Yes	2B2, 3
	Less sandy soil	2	Beaches	Yes	2B3
L70C2:					
Lester-Malardi complex, 6 to 12 percent slopes, eroded	Lester, eroded	60	Moraines	No	---
	Malardi, eroded	25	Moraines	No	---
	Terril	12	Moraines	No	---
	Hamel	3	Drainageways	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L70D2:					
Lester-Malardi complex, 12 to 18 percent slopes, eroded	Lester, eroded	55	Moraines	No	---
	Malardi, eroded	25	Moraines	No	---
	Terril	12	Moraines	No	---
	Ridgeton	5	Moraines	No	---
	Hamel	3	Drainageways	Yes	2B3
L70E:					
Lester-Malardi complex, 18 to 35 percent slopes	Lester	55	Moraines	No	---
	Malardi	25	Moraines	No	---
	Terril	10	Moraines	No	---
	Hamel	5	Drainageways	Yes	2B3
	Ridgeton	5	Moraines	No	---
L71C:					
Metea loamy fine sand, 6 to 12 percent slopes	Metea	80	Moraines	No	---
	Lester	15	Moraines	No	---
	Moon	5	Moraines	No	---
L72A:					
Lundlake loam, depressional, 0 to 1 percent slopes	Lundlake, depressional	90	Depressions, Moraines	Yes	2B3
	Forestcity	10	Drainageways	Yes	2B3
L110E:					
Lester-Ridgeton complex, 18 to 25 percent slopes	Lester	50	Moraines	No	---
	Ridgeton	30	Moraines	No	---
	Cokato	10	Moraines	No	---
	Belview	6	Moraines	No	---
	Hamel	2	Toes	Yes	2B3
	Terril	2	Moraines	No	---

Hydric Soils

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L110F:					
Lester-Ridgeton complex, 25 to 45 percent slopes	Lester	55	Moraines	No	---
	Ridgeton	30	Moraines	No	---
	Cokato	8	Moraines	No	---
	Belview	4	Moraines	No	---
	Terril	2	Moraines	No	---
	Hamel	1	Toes	Yes	2B3
L131A:					
Litchfield loamy fine sand, 0 to 3 percent slopes	Litchfield	85	Outwash plains	No	---
	Darfur	10	Swales	Yes	2B3
	Crowfork	5	Outwash plains	No	---
L132A:					
Hamel-Glencoe, depressional, complex, 0 to 3 percent slopes	Hamel	50	Drainageways, Moraines	Yes	2B3
	Glencoe, depressional	30	Depressions, Moraines	Yes	2B3, 3
	Hamel, overwash	15	Moraines	No	---
	Terril	5	Hills, Moraines	No	---
M-W:					
Water, miscellaneous	Water, miscellaneous	100	---		---
U1A:					
Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes	Urban land	80	Moraines		---
	Udorthents, wet substratum	20	Moraines		---
U2A:					
Udorthents, wet substratum, 0 to 2 percent slopes	Udorthents, wet substratum	100	Moraines		---
U3B:					
Udorthents (cut and fill land), 0 to 6 percent slopes	Udorthents, loamy (cut and fill land)	100	Moraines		---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
U4A:					
Urban land-Udipsamments (cut and fill land) complex, 0 to 2 percent slopes	Urban land	70	Stream terraces	---	---
	Udipsamments, cut and fill land	30	Stream terraces	---	---
U5A:					
Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes, rarely flooded	Urban land, rarely flooded	65	Flood plains	---	---
	Udorthents, wet substratum, rarely flooded	35	Flood plains	---	---
U6B:					
Urban land-Udorthents (cut and fill land) complex, 0 to 6 percent slopes	Urban land	75	Moraines	---	---
	Udorthents, cut and fill land	25	Moraines	---	---
W:					
Water	Water	100	---	---	---

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2003) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
 - B. are poorly drained or very poorly drained and have either:
 - 1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
 - 2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
 - 3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

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