

Hydric Soils

Wabasha 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
1010: Pits, quarry	Pits, quarry	100	Hills, Valley sides	No	---
1038: Udorthents, earthen dam	Udorthents, earthen dam	100	Valleys	No	---
1041C: Riverwash sand, 2 to 12 percent slopes, frequently flooded	Riverwash, frequently flooded	75	Flood plains, Levees	No	---
Az: Arenzville silt loam	Arenzville, occasionally flooded	85	Flood plains	No	---
BbA: Bixby loam, 0 to 2 percent slopes	Bixby	85	Terraces	No	---
BbB: Bixby loam, 2 to 6 percent slopes	Bixby	85	Terraces	No	---
BfE: Boone loamy fine sand, 18 to 35 percent slopes	Boone	90	Valley sides	No	---
BhB: Boone and Chelsea loamy fine sands, 2 to 6 percent slopes	Boone	45	Hills	No	---
	Chelsea	45	Hills	No	---
BhC: Boone and Chelsea loamy fine sands, 6 to 12 percent slopes	Boone	45	Hills	No	---
	Chelsea	45	Hills	No	---
BhD: Boone and Chelsea loamy fine sands, 12 to 18 percent slopes	Boone	45	Hills	No	---
	Chelsea	45	Hills	No	---
BkA: Burkhardt gravelly sandy loam, 0 to 2 percent slopes	Burkhardt	85	Terraces	No	---
BkB: Burkhardt gravelly sandy loam, 2 to 6 percent slopes	Burkhardt	85	Terraces	No	---

Hydric Soils

Wabasha County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
BrA: Burkhardt loam, 0 to 2 percent slopes	Burkhardt	85	Terraces	No	---
BrB: Burkhardt loam, 2 to 6 percent slopes	Burkhardt	85	Terraces	No	---
BtA: Burkhardt sandy loam, 0 to 2 percent slopes	Burkhardt	85	Terraces	No	---
BtB: Burkhardt sandy loam, 2 to 6 percent slopes	Burkhardt	85	Terraces	No	---
BtC2: Burkhardt sandy loam, 6 to 12 percent slopes, moderately eroded	Burkhardt, moderately eroded	85	Terraces	No	---
CaB: Chaseburg fine sandy loam, 2 to 6 percent slopes	Chaseburg, occasionally flooded	85	Drainageways	No	---
ChA: Chaseburg silt loam, 0 to 2 percent slopes	Chaseburg, occasionally flooded	85	Drainageways	No	---
ChB: Chaseburg silt loam, 2 to 6 percent slopes	Chaseburg, occasionally flooded	85	Drainageways	No	---
Co: Colo silty clay loam	Colo, frequently flooded	85	Flood plains	Yes	2B3, 4
DdC2: Dodgeville silt loam, 6 to 12 percent slopes, moderately eroded	Dodgeville, moderately eroded	85	Hills	No	---
DdD2: Dodgeville silt loam, 12 to 18 percent slopes, moderately eroded	Dodgeville, moderately eroded	85	Hills	No	---
DgC2: Dodgeville silt loam, shallow, 6 to 12 percent slopes, moderately eroded	Dodgeville, shallow, moderately eroded	85	Hills	No	---
DgD2: Dodgeville silt loam, shallow, 12 to 18 percent slopes, moderately eroded	Dodgeville, shallow, moderately eroded	85	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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DgE: Dodgeville silt loam, shallow, 18 to 35 percent slopes	Dodgeville, shallow	85	Valley sides	No	---
DhA: Downs and Mt. Carroll silt loams, 0 to 2 percent slopes	Downs	45	Loess hills	No	---
	Mt. Carroll	45	Loess hills	No	---
DmA: Downs and Mt. Carroll silt loams, benches, 0 to 2 percent slopes	Downs, benches	45	Terraces	No	---
	Mt. Carroll, benches	45	Terraces	No	---
DmB: Downs and Mt. Carroll silt loams, benches, 2 to 6 percent slopes	Downs, benches	45	Terraces	No	---
	Mt. Carroll, benches	45	Terraces	No	---
DnB: Dubuque silt loam, 2 to 6 percent slopes	Dubuque	85	Hills	No	---
DnC2: Dubuque silt loam, 6 to 12 percent slopes, moderately eroded	Dubuque, moderately eroded	85	Hills	No	---
DnD2: Dubuque silt loam, 12 to 18 percent slopes, moderately eroded	Dubuque, moderately eroded	85	Hills	No	---
DnE: Dubuque silt loam, 18 to 25 percent slopes	Dubuque	85	Valley sides	No	---
DnF: Dubuque silt loam, 25 to 35 percent slopes	Dubuque	85	Valley sides	No	---
DrB: Dubuque silt loam, shallow, 2 to 6 percent slopes	Dubuque, shallow	85	Hills	No	---
DrC2: Dubuque silt loam, shallow, 6 to 12 percent slopes, moderately eroded	Dubuque, shallow, moderately eroded	85	Hills	No	---
DrD2: Dubuque silt loam, shallow, 12 to 18 percent slopes, moderately eroded	Dubuque, shallow, moderately eroded	85	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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DrE: Dubuque silt loam, shallow, 18 to 25 percent slopes	Dubuque, shallow	85	Valley sides	No	---
DrF: Dubuque silt loam, shallow, 25 to 35 percent slopes	Dubuque, shallow	85	Valley sides	No	---
Du: Dune land	Dune land	100	Dunes	No	---
FaA: Fayette silt loam, uplands, 0 to 2 percent slopes	Fayette, uplands	85	Loess hills	No	---
FaE: Fayette silt loam, uplands, 18 to 25 percent slopes	Fayette, uplands	85	Loess hills	No	---
FaF: Fayette silt loam, uplands, 25 to 35 percent slopes	Fayette, uplands	85	Valley sides	No	---
FbA: Fayette silt loam, benches, 0 to 2 percent slopes	Fayette, benches	85	Terraces	No	---
FbB: Fayette silt loam, benches, 2 to 6 percent slopes	Fayette, benches	85	Terraces	No	---
FbC2: Fayette silt loam, benches, 6 to 12 percent slopes, moderately eroded	Fayette, benches, moderately eroded	85	Terraces	No	---
GaB: Gale silt loam, 2 to 6 percent slopes	Gale	85	Hills	No	---
GaC2: Gale silt loam, 6 to 12 percent slopes, moderately eroded	Gale, moderately eroded	85	Hills	No	---
GaD2: Gale silt loam, 12 to 18 percent slopes, moderately eroded	Gale, moderately eroded	85	Hills	No	---
GhC2: Gale-Hixton complex, shallow, 6 to 12 percent slopes, moderately eroded	Gale, shallow, moderately eroded	50	Hills	No	---
	Hixton, shallow, moderately eroded	45	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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GhD2:					
Gale-Hixton complex, shallow, 12 to 18 percent slopes, moderately eroded	Gale, shallow, moderately eroded	50	Hills	No	---
	Hixton, shallow, moderately eroded	45	Hills	No	---
GhE:					
Gale-Hixton complex, shallow, 18 to 25 percent slopes	Gale, shallow	50	Hills	No	---
	Hixton, shallow	45	Hills	No	---
Gm:					
Garwin silt loam	Garwin, frequently flooded	85	Drainageways	Yes	2B3
GP:					
Pits, gravel-Udipsammments complex	Pits, gravel	50	Eskers, Moraines, Outwash plains, Stream terraces	No	---
	Udipsammments	45	Eskers, Moraines, Outwash plains, Stream terraces	No	---
	Water	5	---	---	---
HfB:					
Hixton fine sandy loam, 2 to 6 percent slopes	Hixton	85	Hills, Valley sides	No	---
HfC2:					
Hixton fine sandy loam, 6 to 12 percent slopes, moderately eroded	Hixton, moderately eroded	85	Hills, Valley sides	No	---
HfD2:					
Hixton fine sandy loam, 12 to 18 percent slopes, moderately eroded	Hixton, moderately eroded	85	Hills, Valley sides	No	---
HfE:					
Hixton fine sandy loam, 18 to 35 percent slopes	Hixton	85	Valley sides	No	---
Hu:					
Huntsville silt loam	Huntsville, occasionally flooded	85	Flood plains	No	---
M-W:					
Water, miscellaneous	Water, miscellaneous	100	---	---	---
MbA:					
Medary silt loam, 0 to 2 percent slopes	Medary	85	Terraces	No	---

Hydric Soils

Wabasha County, Minnesota

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MbB: Medary silt loam, 2 to 6 percent slopes	Medary	85	Terraces	No	---
MdA: Meridian sandy loam, 0 to 2 percent slopes	Meridian	85	Terraces	No	---
MdB: Meridian sandy loam, 2 to 6 percent slopes	Meridian	85	Swales	No	---
MdC2: Meridian sandy loam, 6 to 12 percent slopes, moderately eroded	Meridian, moderately eroded	85	Swales	No	---
Mn: Minneiska silt loam	Minneiska, occasionally flooded	85	Flood plains	No	---
MuA: Muscatine silt loam, 0 to 2 percent slopes	Muscatine	85	Drainageways	No	---
MuB: Muscatine silt loam, 2 to 6 percent slopes	Muscatine	85	Drainageways	No	---
N501B: Downs silt loam, 2 to 6 percent slopes	Downs	95	Loess hills	No	---
	Newwienna	5	Loess hills	No	---
N501C2: Downs silt loam, 6 to 12 percent slopes, moderately eroded	Downs, moderately eroded	90	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Newwienna	5	Loess hills	No	---
N501D2: Downs silt loam, 12 to 18 percent slopes, moderately eroded	Downs, moderately eroded	90	Loess hills	No	---
	Barremills, drainageway	10	Drainageways, Loess hills	No	---
N509F: Bellechester-Etter complex, 18 to 45 percent slopes	Bellechester	55	Valley sides	No	---
	Etter	30	Valley sides	No	---

Hydric Soils

Wabasha County, Minnesota

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N514B:					
Joy-Ossian, occasionally flooded, complex, 1 to 5 percent slopes	Joy	60	Drainageways	No	---
	Ossian, occasionally flooded	20	Drainageways	Yes	2B3
	Buckhart	10	Loess hills	No	---
	Barremills, drainageway	5	Drainageways	No	---
	Otter, drainageway, frequently flooded	5	Drainageways	Yes	2B3
N517A:					
Oak Center-Mt. Carroll complex, 0 to 2 percent slopes	Oak Center	55	Structural benches	No	---
	Mt. Carroll	35	Structural benches	No	---
N518B:					
Lindstrom silt loam, 2 to 6 percent slopes	Lindstrom	75	Valley sides	No	---
N518C2:					
Lindstrom silt loam, 6 to 12 percent slopes, moderately eroded	Lindstrom, moderately eroded	75	Valley sides	No	---
N518D2:					
Lindstrom silt loam, 12 to 18 percent slopes, moderately eroded	Lindstrom, moderately eroded	80	Valley sides	No	---
N519B:					
Vasa silt loam, 1 to 4 percent slopes	Vasa	70	Loess hills	No	---
N520B:					
Hersey-Oak Center-Mt. Carroll complex, 2 to 6 percent slopes	Hersey	50	Loess hills	No	---
	Oak Center	25	Hills	No	---
	Mt. Carroll	15	Loess hills	No	---
N520C2:					
Hersey-Oak Center-Mt. Carroll complex, 6 to 12 percent slopes, moderately eroded	Hersey, moderately eroded	50	Loess hills	No	---
	Oak Center, moderately eroded	20	Hills	No	---
	Mt. Carroll, moderately eroded	15	Loess hills	No	---

Hydric Soils

Wabasha County, Minnesota

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N521B:					
Mt. Carroll silt loam, 2 to 6 percent slopes	Mt. Carroll	95	Loess hills	No	---
N521C2:					
Mt. Carroll silt loam, 6 to 12 percent slopes, moderately eroded	Mt. Carroll, moderately eroded	90	Loess hills	No	---
N521D2:					
Mt. Carroll silt loam, 12 to 18 percent slopes, moderately eroded	Mt. Carroll, moderately eroded	85	Loess hills	No	---
N526F:					
Gale-Oak Center complex, 18 to 45 percent slopes	Gale	45	Valley sides	No	---
	Oak Center	30	Valley sides	No	---
N555B:					
Tama-Dinsmore complex, 2 to 6 percent slopes	Tama	50	Loess hills	No	---
	Dinsmore	45	Loess hills	No	---
	Klingmore	5	Loess hills	No	---
N555C2:					
Tama-Dinsmore complex, 6 to 12 percent slopes, moderately eroded	Tama, moderately eroded	55	Loess hills	No	---
	Dinsmore, moderately eroded	35	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Klingmore	5	Loess hills	No	---
N572C2:					
Downs-Hersey, bedrock substratum, complex, 6 to 12 percent slopes, moderately eroded	Downs, moderately eroded	65	Loess hills	No	---
	Hersey, bedrock substratum, moderately eroded	25	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Nasset, moderately eroded	5	Loess hills	No	---

Hydric Soils

Wabasha County, Minnesota

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N572D2:					
Downs-Hersey, bedrock substratum, complex, 12 to 18 percent slopes, moderately eroded	Downs, moderately eroded	65	Loess hills	No	---
	Hersey, bedrock substratum, moderately eroded	25	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Nasset, moderately eroded	5	Loess hills	No	---
N574B:					
Downs-Hersey complex, 2 to 6 percent slopes	Downs	50	Loess hills	No	---
	Hersey	45	Loess hills	No	---
	Somewhat poorly drained soils	5	Loess hills, Swales	No	---
N574C2:					
Downs-Hersey complex, 6 to 12 percent slopes, moderately eroded	Downs, moderately eroded	50	Loess hills	No	---
	Hersey, moderately eroded	40	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Muscature, till substratum	5	Loess hills, Swales	No	---
N574D2:					
Downs-Hersey complex, 12 to 18 percent slopes, moderately eroded	Downs, moderately eroded	45	Loess hills	No	---
	Hersey, moderately eroded	40	Loess hills	No	---
	Barremills, drainageway	5	Drainageways, Loess hills	No	---
	Newvienna, till substratum	5	Loess hills	No	---
	Racine, moderately eroded	5	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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N578B:					
Barremills silt loam, drainageway, 1 to 5 percent slopes, occasionally flooded	Barremills, drainageway, occasionally flooded	85	Drainageways	No	---
	Osco	10	Drainageways	No	---
	Huntsville, drainageway, frequently flooded	5	Drainageways	No	---
N580G:					
Brodale, very flaggy-Bellechester-Rock outcrop complex, 45 to 90 percent slopes	Brodale, very flaggy	40	Valley sides	No	---
	Bellechester	25	Valley sides	No	---
	Rock outcrop	10	Valley sides	No	---
N584E:					
Downs silt loam, valleys, 18 to 25 percent slopes	Downs, valleys	65	Valley sides	No	---
N585B:					
Mt. Carroll-Hersey complex, 2 to 6 percent slopes	Mt. Carroll	50	Loess hills	No	---
	Hersey	45	Loess hills	No	---
N585C2:					
Mt. Carroll-Hersey complex, 6 to 12 percent slopes, moderately eroded	Mt. Carroll, moderately eroded	50	Loess hills	No	---
	Hersey, moderately eroded	40	Loess hills	No	---
N585D2:					
Mt. Carroll-Hersey complex, 12 to 18 percent slopes, moderately eroded	Mt. Carroll, moderately eroded	45	Loess hills	No	---
	Hersey, moderately eroded	40	Loess hills	No	---
N590B:					
Tama silt loam, valleys, 2 to 6 percent slopes	Tama, valleys	80	Valley sides	No	---
N590C2:					
Tama silt loam, valleys, 6 to 12 percent slopes, moderately eroded	Tama, valleys, moderately eroded	75	Valley sides	No	---
N590D2:					
Tama silt loam, valleys, 12 to 18 percent slopes, moderately eroded	Tama, valleys, moderately eroded	75	Valley sides	No	---

Hydric Soils

Wabasha County, Minnesota

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N606A:					
Tama silt loam, sandy substratum, 0 to 3 percent slopes	Tama, sandy substratum	60	Stream terraces	No	---
N614A:					
Kalmarville-Radford complex, 0 to 3 percent slopes, frequently flooded	Kalmarville, frequently flooded	50	Flood plains	Yes	2B3
	Radford, frequently flooded	30	Flood plains	No	---
N619A:					
Kennebec-Lawson, channeled, complex, 0 to 3 percent slopes, flooded	Kennebec, occasionally flooded	50	Flood plains	No	---
	Lawson, channeled, frequently flooded	35	Flood plains	No	---
N638G:					
Brodale, flaggy-Bellechester complex, 30 to 70 percent slopes	Brodale, flaggy	45	Valley sides	No	---
	Bellechester	25	Valley sides	No	---
N639F:					
Frontenac-Lacrescent complex, 20 to 45 percent slopes	Frontenac	55	Valley sides	No	---
	Lacrescent	25	Valley sides	No	---
N639G:					
Frontenac-Lacrescent complex, 30 to 70 percent slopes	Frontenac	55	Valley sides	No	---
	Lacrescent	30	Valley sides	No	---
N640G:					
Lacrescent, flaggy-Frontenac-Rock outcrop complex, 45 to 90 percent slopes	Lacrescent, flaggy	50	Valley sides	No	---
	Frontenac	30	Valley sides	No	---
	Rock outcrop	10	Valley sides	No	---
N641F:					
Brodale channery loam, 20 to 45 percent slopes, flaggy	Brodale, flaggy	70	Valley sides	No	---
N644A:					
Abscota loamy sand, 0 to 3 percent slopes, occasionally flooded	Abscota, occasionally flooded	75	Flood plains	No	---

Hydric Soils

Wabasha County, Minnesota

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N645A:					
Nodaway-Minneiska complex, 0 to 3 percent slopes, frequently flooded	Nodaway, frequently flooded	35	Flood plains	No	---
	Minneiska, frequently flooded	30	Flood plains	No	---
N646A:					
Ceresco-Spillville complex, 0 to 3 percent slopes, frequently flooded	Ceresco, frequently flooded	40	Flood plains	No	---
	Spillville, frequently flooded	20	Flood plains	No	---
N647A:					
Dunnbot-Scotah complex, 0 to 3 percent slopes, frequently flooded	Dunnbot, frequently flooded	40	Flood plains	No	---
	Scotah, frequently flooded	30	Flood plains, Natural levees	No	---
N648A:					
Glendora-Kalmarville complex, 0 to 2 percent slopes, frequently flooded	Glendora, frequently flooded	50	Flood plains	Yes	2B3, 4
	Kalmarville, frequently flooded	25	Flood plains	Yes	2B3, 4
N649A:					
Shandep loam, channeled, 0 to 2 percent slopes, frequently flooded	Shandep, channeled, frequently flooded	80	Flood plains	Yes	2B3, 4
N650F:					
Downs-Oak Center complex, 25 to 35 percent slopes	Downs	70	Valley sides	No	---
	Oak Center	25	Valley sides	No	---
N660A:					
Minneiska sandy loam, 0 to 2 percent slopes, occasionally flooded	Minneiska, occasionally flooded	80	Flood plains	No	---
N665A:					
Rawles silt loam, 0 to 2 percent slopes, occasionally flooded	Rawles, occasionally flooded	75	Flood plains	No	---
N670A:					
Dockery silt loam, 0 to 2 percent slopes, occasionally flooded	Dockery, occasionally flooded	80	Flood plains	No	---
N675D:					
Elizabeth silt loam, 6 to 18 percent slopes	Elizabeth	70	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
PaA: Plainfield fine sand, 0 to 2 percent slopes	Plainfield	90	Terraces	No	---
PaB: Plainfield fine sand, 2 to 6 percent slopes	Plainfield	90	Terraces	No	---
PaC: Plainfield fine sand, 6 to 12 percent slopes	Plainfield	90	Terraces	No	---
PbA: Port Byron silt loam, 0 to 2 percent slopes	Port Byron	85	Loess hills	No	---
PoA: Port Byron silt loam, benches, 0 to 2 percent slopes	Port Byron, benches	85	Terraces	No	---
PoB: Port Byron silt loam, benches, 2 to 6 percent slopes	Port Byron, benches	85	Terraces	No	---
RaA: Racine silt loam, 0 to 2 percent slopes	Racine	85	Hills	No	---
RaB: Racine silt loam, 2 to 6 percent slopes	Racine	85	Hills	No	---
RaC2: Racine silt loam, 6 to 12 percent slopes, moderately eroded	Racine, moderately eroded	85	Hills	No	---
RaD2: Racine silt loam, 12 to 18 percent slopes, moderately eroded	Racine, moderately eroded	85	Hills	No	---
ReB: Renova silt loam, 2 to 6 percent slopes	Renova	85	Hills	No	---
ReC2: Renova silt loam, 6 to 12 percent slopes, moderately eroded	Renova, moderately eroded	85	Hills	No	---
ReD2: Renova silt loam, 12 to 18 percent slopes, moderately eroded	Renova, moderately eroded	85	Hills	No	---
ReE: Renova silt loam, 18 to 25 percent slopes	Renova	85	Hills	No	---
ReF: Renova silt loam, 25 to 35 percent slopes	Renova	85	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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RkB:					
Renova-Wyckoff complex, 2 to 6 percent slopes	Renova	50	Hills	No	---
	Wyckoff	30	Hills	No	---
RkC2:					
Renova-Wyckoff complex, 6 to 12 percent slopes, moderately eroded	Renova, moderately eroded	50	Hills	No	---
	Wyckoff, moderately eroded	30	Hills	No	---
RkD2:					
Renova-Wyckoff complex, 12 to 18 percent slopes, moderately eroded	Renova, moderately eroded	45	Hills	No	---
	Wyckoff, moderately eroded	35	Hills	No	---
SbD2:					
Seaton-Bold soils, 12 to 18 percent slopes, moderately eroded	Seaton, moderately eroded	55	Hills	No	---
	Bold, moderately eroded	30	Hills	No	---
SpA:					
Sparta loamy fine sand, 0 to 2 percent slopes	Sparta	90	Terraces	No	---
SpB:					
Sparta loamy fine sand, 2 to 6 percent slopes	Sparta	90	Terraces	No	---
St:					
Stony colluvial land	Stony colluvial land	90	Drainageways	No	---
ThA:					
Tell silt loam, 0 to 2 percent slopes	Tell	85	Terraces	No	---
ThB:					
Tell silt loam, 2 to 6 percent slopes	Tell	85	Terraces	No	---
Tm:					
Terrace escarpments, loamy	Terrace escarpments, loamy	95	Terraces	No	---
Ts:					
Terrace escarpments, sandy	Terrace escarpments, sandy	90	Terraces	No	---
W:					
Water	Water	100	---		---

Hydric Soils

Wabasha County, Minnesota

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WaA: Waukegan silt loam, 0 to 2 percent slopes	Waukegan	85	Terraces	No	---
WaB: Waukegan silt loam, 2 to 6 percent slopes	Waukegan	85	Terraces	No	---
WaC2: Waukegan silt loam, 6 to 12 percent slopes, moderately eroded	Waukegan, moderately eroded	85	Terraces	No	---
WhB: Whalan silt loam, 2 to 6 percent slopes	Whalan	85	Hills	No	---
WhC2: Whalan silt loam, 6 to 12 percent slopes, moderately eroded	Whalan, moderately eroded	85	Hills	No	---
WhD2: Whalan silt loam, 12 to 18 percent slopes, moderately eroded	Whalan, moderately eroded	85	Hills	No	---
WsB: Whalan silt loam, shallow, 2 to 6 percent slopes	Whalan, shallow	85	Hills	No	---
WsC2: Whalan silt loam, shallow, 6 to 12 percent slopes, moderately eroded	Whalan, shallow, moderately eroded	85	Hills	No	---
WsD2: Whalan silt loam, shallow, 12 to 18 percent slopes, moderately eroded	Whalan, shallow, moderately eroded	85	Hills	No	---
WsE: Whalan silt loam, 18 to 25 percent slopes	Whalan	85	Valley sides	No	---
WsF: Whalan silt loam, 25 to 35 percent slopes	Whalan	85	Valley sides	No	---
WvB: Wykoff gravelly loam, 2 to 6 percent slopes	Wykoff	85	Hills	No	---
WvC2: Wykoff gravelly loam, 6 to 12 percent slopes, moderately eroded	Wykoff, moderately eroded	85	Hills	No	---
WvD2: Wykoff gravelly loam, 12 to 18 percent slopes, moderately eroded	Wykoff, moderately eroded	85	Hills	No	---

Hydric Soils

Wabasha County, Minnesota

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WvE: Wykoff gravelly loam, 18 to 35 percent slopes	Wykoff	85	Hills	No	---
Zb: Zumbro loamy fine sand	Zumbro, occasionally flooded	85	Flood plains	No	---
ZgA: Zwingle silt loam, 0 to 2 percent slopes	Zwingle	85	Terraces	Yes	2B3
ZgB: Zwingle silt loam, 2 to 6 percent slopes	Zwingle	85	Terraces	Yes	2B3

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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