

# Hydric Soils

Pipestone 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
1003B:					
Udorthents (cut and fill land), 0 to 6 percent slopes	Udorthents, (cut and fill land)	100	Moraines		---
GP:					
Pits, gravel-Udipsamments complex	Pits, gravel	80	Moraines, Outwash plains, Stream terraces		---
	Udipsamments	20	Moraines, Outwash plains, Stream terraces		---
J1A:					
Parnell silty clay loam, depressional, 0 to 1 percent slopes	Parnell, depressional	90	Till plains	Yes	2B3, 3
	Vallers	5	Till plains	Yes	2B3
	Winger	5	Till plains	Yes	2B3
J2A:					
La Prairie loam, 0 to 2 percent slopes, occasionally flooded	La Prairie, occasionally flooded	90	Flood plains	No	---
	Lamoure, occasionally flooded	10	Flood plains	Yes	2B3
J7A:					
Sverdrup sandy loam, 0 to 2 percent slopes	Sverdrup	80	Outwash plains	No	---
	Arveson	5	Outwash plains	Yes	2B3
	Clontarf	5	Outwash plains	No	---
	Egeland	5	Outwash plains	No	---
	Estelline	5	Outwash plains	No	---
J7B:					
Sverdrup sandy loam, 2 to 6 percent slopes	Sverdrup	85	Outwash plains	No	---
	Clontarf	5	Outwash plains	No	---
	Egeland	5	Outwash plains	No	---
	Estelline	5	Outwash plains	No	---

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<b>J12A:</b>					
Marysland loam, 0 to 2 percent slopes	Marysland	85	Outwash plains	Yes	2B3
	Arveson	10	Outwash plains	Yes	2B3
	Marysland, depressional	3	Outwash plains	Yes	2B3, 3
	Malachy	2	Outwash plains	No	---
<b>J22A:</b>					
Renshaw loam, 0 to 3 percent slopes	Renshaw	85	Outwash plains	No	---
	Fordtown	10	Outwash plains	No	---
	Arvilla	3	Outwash plains	No	---
	Fordville	2	Outwash plains	No	---
<b>J23A:</b>					
Lamoure silty clay loam, 0 to 2 percent slopes, occasionally flooded	Lamoure, occasionally flooded	85	Flood plains	Yes	2B3
	Rauville, frequently flooded	10	Flood plains	Yes	2B3, 4
	La Prairie, occasionally flooded	5	Flood plains	No	---
<b>J25A:</b>					
Rauville silty clay loam, 0 to 1 percent slopes, frequently flooded	Rauville, frequently flooded	90	Flood plains	Yes	2B3, 4
	Lamoure, occasionally flooded	10	Flood plains	Yes	2B3
<b>J26B:</b>					
Darnen loam, 2 to 6 percent slopes	Darnen	90	Moraines	No	---
	Hokans	5	Moraines	No	---
	Lakepark	5	Moraines	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>J31B:</b>					
Arvilla-Sandberg complex, 2 to 6 percent slopes	Arvilla	45	Outwash plains	No	---
	Sandberg	40	Outwash plains	No	---
	Renshaw	10	Outwash plains	No	---
	Fordtown	5	Outwash plains	No	---
<b>J42C:</b>					
Sandberg-Arvilla complex, 6 to 12 percent slopes	Sandberg	60	Outwash plains	No	---
	Arvilla	30	Outwash plains	No	---
	Everts	10	Outwash plains	No	---
<b>J45F:</b>					
Sandberg sandy loam, 12 to 40 percent slopes	Sandberg	80	Outwash plains	No	---
	Everts	10	Outwash plains	No	---
	Arvilla	5	Outwash plains	No	---
	Sioux	5	Outwash plains	No	---
<b>J47A:</b>					
Swenoda sandy loam, 1 to 3 percent slopes	Swenoda, moderately wet	85	Outwash plains	No	---
	Clontarf	10	Outwash plains	No	---
	Egeland	5	Outwash plains	No	---
<b>J48A:</b>					
Bigstone and Parnell soils, ponded, 0 to 1 percent slopes	Bigstone, ponded	40	Moraines	Yes	2B3, 3
	Parnell, ponded	40	Moraines	Yes	2B3, 3
	Colvin	10	Moraines	Yes	2B3
	Vallers	10	Moraines	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>J69A:</b>					
Athelwold silty clay loam, 0 to 2 percent slopes	Athelwold	85	Outwash plains	No	---
	Estelline	10	Outwash plains	No	---
	Trosky	5	Outwash plains	Yes	2B3
<b>J70A:</b>					
Brandt silty clay loam, 0 to 2 percent slopes	Brandt	85	Outwash plains	No	---
	Estelline	10	Outwash plains	No	---
	Goldsmith	5	Outwash plains	No	---
<b>J71A:</b>					
Brookings silty clay loam, 1 to 3 percent slopes	Brookings	80	Till plains	No	---
	Badger	10	Till plains	No	---
	Kranzburg, occasional saturation	10	Till plains	No	---
<b>J72B:</b>					
Renshaw-Sandberg complex, 2 to 6 percent slopes	Renshaw	75	Outwash plains	No	---
	Sandberg	15	Outwash plains	No	---
	Fordville	10	Outwash plains	No	---
<b>J73D2:</b>					
Buse clay loam, 12 to 18 percent slopes, moderately eroded	Buse, moderately eroded	72	Till plains	No	---
	Soils that have a moderately deep surface	14	Till plains	No	---
	Vienna, moderately eroded	14	Till plains	No	---
<b>J73E:</b>					
Buse clay loam, 18 to 25 percent slopes	Buse	80	Till plains	No	---
	Barnes	10	Till plains	No	---
	Soils that have a moderately deep surface	10	Till plains	No	---

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J73F:					
Buse clay loam, 25 to 40 percent slopes	Buse	80	Till plains	No	---
	Barnes	10	Till plains	No	---
	Soils that have a moderately deep surface	10	Till plains	No	---
J74A:					
Estelline silty clay loam, 0 to 2 percent slopes	Estelline	80	Outwash plains	No	---
	Athelwold	10	Outwash plains	No	---
	Brandt	10	Outwash plains	No	---
J74B:					
Estelline silty clay loam, 2 to 6 percent slopes	Estelline	85	Outwash plains	No	---
	Athelwold	5	Outwash plains	No	---
	Brandt	5	Outwash plains	No	---
	Renshaw	5	Outwash plains	No	---
J75A:					
Fordville loam, 0 to 2 percent slopes	Fordville	85	Outwash plains	No	---
	Renshaw	10	Outwash plains	No	---
	Spottswood	5	Outwash plains	No	---
J75B:					
Fordville loam, 2 to 6 percent slopes	Fordville	85	Outwash plains	No	---
	Renshaw	10	Outwash plains	No	---
	Spottswood	5	Outwash plains	No	---
J76A:					
Parnell silty clay loam, depressional, verdi, 0 to 1 percent slopes	Parnell, depressional, verdi	90	Till plains	Yes	2B3, 3
	Hidewood	10	Till plains	Yes	2B3

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<b>J77A:</b>					
Lamoure silty clay loam, 0 to 2 percent slopes, frequently flooded	Lamoure, frequently flooded	85	Flood plains	Yes	2B3, 4
	Rauville, frequently flooded	10	Flood plains	Yes	2B3, 4
	La Prairie, occasionally flooded	5	Flood plains	No	---
<b>J78A:</b>					
Lismore silty clay loam, 1 to 3 percent slopes	Lismore	75	Till plains	No	---
	Brookings	10	Till plains	No	---
	Vienna, occasional saturation	10	Till plains	No	---
	Hidewood	5	Till plains	Yes	2B3
<b>J79B:</b>					
Vienna-Brookings complex, 1 to 4 percent slopes	Vienna, occasional saturation	55	Till plains	No	---
	Brookings	35	Till plains	No	---
	Kranzburg, occasional saturation	5	Till plains	No	---
	Lismore	5	Till plains	No	---
<b>J80A:</b>					
Lamoure-La Prairie complex, channeled, 0 to 2 percent slopes, frequently flooded	Lamoure, channeled, frequently flooded	50	Flood plains	Yes	2B3, 4
	La Prairie, channeled, frequently flooded	40	Flood plains	Yes	4
	Rauville, frequently flooded	10	Flood plains	Yes	2B3, 4
<b>J81C2:</b>					
Renshaw-Barnes complex, 6 to 12 percent slopes, moderately eroded	Renshaw, moderately eroded	70	Outwash plains	No	---
	Barnes, moderately eroded	20	Outwash plains	No	---
	Buse, moderately eroded	5	Outwash plains	No	---
	Sandberg	5	Outwash plains	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>J82C:</b>					
Rock outcrop-Ihlen complex, 6 to 12 percent slopes	Rock outcrop	45	Till plains		---
	Ihlen	40	Till plains	No	---
	Bluemound	10	Till plains	No	---
	Soils that are deep to bedrock	5	Till plains	No	---
<b>J83F:</b>					
Sandberg-Buse-Everts complex, 12 to 40 percent slopes	Sandberg	55	Outwash plains	No	---
	Buse	25	Outwash plains	No	---
	Everts	15	Outwash plains	No	---
	Sioux	5	Outwash plains	No	---
<b>J84A:</b>					
Strayhoss loam, 0 to 2 percent slopes	Strayhoss	85	Outwash plains	No	---
	Estelline	10	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---
<b>J84B:</b>					
Strayhoss loam, 2 to 6 percent slopes	Strayhoss	85	Outwash plains	No	---
	Estelline	10	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---
<b>J85A:</b>					
Trosky silty clay loam, 0 to 2 percent slopes	Trosky	90	Outwash plains	Yes	2B3
	Athelwold	5	Outwash plains	No	---
	Soils that are deep to gravel	5	Outwash plains	Yes	2B3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>J86B:</b>					
Vienna silty clay loam, 3 to 6 percent slopes	Vienna, occasional saturation	85	Till plains	No	---
	Brookings	5	Till plains	No	---
	Kranzburg, occasional saturation	5	Till plains	No	---
	Lismore	5	Till plains	No	---
<b>J87A:</b>					
Waubay silty clay loam, loess deposit, 1 to 3 percent slopes	Waubay, loess deposit	85	Till plains	No	---
	Badger	5	Till plains	No	---
	Brookings	5	Till plains	No	---
	Poinsett, loess deposit, occasional saturation	5	Till plains	No	---
<b>J88B:</b>					
Kranzburg silty clay loam, 3 to 6 percent slopes	Kranzburg, occasional saturation	85	Till plains	No	---
	Brookings	10	Till plains	No	---
	Vienna, occasional saturation	5	Till plains	No	---
<b>J89B:</b>					
Lanona-Swenoda complex, 2 to 6 percent slopes	Lanona, occasional saturation	50	Outwash plains	No	---
	Swenoda	40	Outwash plains	No	---
	Doburg, occasional saturation	10	Outwash plains	No	---

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<b>J90B:</b>					
Kranzburg-Brookings complex, 1 to 4 percent slopes	Kranzburg, occasional saturation	55	Till plains	No	---
	Brookings	35	Till plains	No	---
	Vienna, occasional saturation	5	Till plains	No	---
	Waubay, loess deposit	5	Till plains	No	---
<b>J91B:</b>					
Darnen loam, stratified substratum, 2 to 6 percent slopes	Darnen, stratified substratum	90	Moraines	No	---
	Egeland	4	Outwash plains	No	---
	Embden	3	Outwash plains	No	---
	Fordville	3	Outwash plains	No	---
<b>J92C2:</b>					
Buse-Vienna complex, 6 to 12 percent slopes, moderately eroded	Buse, moderately eroded	50	Till plains	No	---
	Vienna, moderately eroded	20	Till plains	No	---
	Barnes, moderately eroded	10	Till plains	No	---
	Vienna	10	Till plains	No	---
	Buse	5	Till plains	No	---
	Lismore	5	Till plains	No	---
<b>J93A:</b>					
Hidewood-Badger complex, 0 to 2 percent slopes	Hidewood	50	Till plains	Yes	2B3
	Badger	30	Till plains	No	---
	Hidewood, frequently flooded	10	Till plains	Yes	2B3
	Brookings	5	Till plains	No	---
	McIntosh	5	Till plains	No	---

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<b>J94A:</b>					
Parnell-McIntosh complex, 0 to 3 percent slopes	Parnell	70	Till plains	Yes	2B3
	McIntosh	20	Till plains	No	---
	Brookings	5	Till plains	No	---
	Winger	5	Till plains	Yes	2B3
<b>J95E:</b>					
Buse, stony-Wilno complex, 18 to 25 percent slopes	Buse, stony	75	Moraines	No	---
	Wilno	15	Moraines	No	---
	Barnes	5	Moraines	No	---
	Darnen	5	Moraines	No	---
<b>J95F:</b>					
Buse, stony-Wilno complex, 25 to 40 percent slopes	Buse, stony	75	Moraines	No	---
	Wilno	15	Moraines	No	---
	Barnes	5	Moraines	No	---
	Darnen	5	Moraines	No	---
<b>J96B:</b>					
Barnes-Buse complex, 3 to 6 percent slopes	Barnes, occasional saturation	65	Till plains	No	---
	Buse	15	Till plains	No	---
	Barnes, moderately eroded, occasional saturation	10	Till plains	No	---
	Svea	9	Till plains	No	---
	Flom	1	Swales	Yes	2B3

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<b>J96C2:</b>					
Barnes-Buse complex, 6 to 12 percent slopes, moderately eroded	Barnes, moderately eroded	50	Moraines	No	---
	Buse, moderately eroded	30	Moraines	No	---
	Barnes	10	Moraines	No	---
	Darnen	5	Moraines	No	---
	Svea	5	Moraines	No	---
<b>J99A:</b>					
Lakepark clay loam, 0 to 3 percent slopes, overwash	Lakepark, overwash	85	Moraines	No	---
	Lakepark, frequently flooded	10	Moraines	Yes	2B3
	Parnell, depressional	5	Moraines	Yes	2B3, 3
<b>J100D2:</b>					
Buse, eroded-Wilno complex, 12 to 18 percent slopes	Buse, moderately eroded	70	Moraines	No	---
	Wilno	15	Moraines	No	---
	Barnes, moderately eroded	5	Moraines	No	---
	Buse	5	Moraines	No	---
	Darnen	5	Moraines	No	---
<b>J101B:</b>					
Hokans-Svea complex, 1 to 4 percent slopes	Hokans	70	Moraines	No	---
	Svea	20	Moraines	No	---
	Buse	5	Moraines	No	---
	Lakepark	5	Moraines	Yes	2B3

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J104A:					
Svea loam, 1 to 3 percent slopes	Svea	75	Moraines	No	---
	Hokans	10	Moraines	No	---
	Lakepark	10	Moraines	Yes	2B3
	Balaton	5	Moraines	No	---
J105A:					
Arvilla sandy loam, 0 to 2 percent slopes	Arvilla	85	Outwash plains	No	---
	Fordtown	5	Outwash plains	No	---
	Fordville	5	Outwash plains	No	---
	Renshaw	5	Outwash plains	No	---
J106B:					
Barnes-Buse-Svea complex, 1 to 6 percent slopes	Barnes, occasional saturation	60	Till plains	No	---
	Buse	15	Till plains	No	---
	Svea	15	Till plains	No	---
	Barnes, moderately eroded, occasional saturation	9	Till plains	No	---
	Flom	1	Swales	Yes	2B3
J107A:					
Lakepark-Roliss-Parnell, depressional, complex, 0 to 3 percent slopes	Lakepark	35	Moraines	Yes	2B3
	Roliss	25	Moraines	Yes	2B3
	Parnell, depressional	15	Moraines	Yes	2B3, 3
	Svea	10	Moraines	No	---
	Vallers	10	Moraines	Yes	2B3
	Balaton	5	Moraines	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
M-W: Water, miscellaneous	Water, miscellaneous	100	---		---
P4A: Calco silty clay loam, 0 to 2 percent slopes, frequently flooded	Calco, frequently flooded	80	Flood plains	Yes	2B3, 4
	Calco, occasionally flooded	10	Flood plains	Yes	2B3
	Havelock, frequently flooded	5	Flood plains	Yes	2B3, 4
	Spillco, frequently flooded	5	Flood plains	Yes	4
P5A: Calco silty clay loam, 0 to 2 percent slopes, occasionally flooded	Calco, occasionally flooded	80	Flood plains	Yes	2B3
	Calco, frequently flooded	5	Flood plains	Yes	2B3, 4
	Colo, occasionally flooded	5	Flood plains	Yes	2B3
	Havelock, occasionally flooded	5	Flood plains	Yes	2B3
	Spillco, occasionally flooded	5	Flood plains	No	---
P8A: Cylinder loam, 0 to 2 percent slopes, occasionally flooded	Cylinder, occasionally flooded	80	Outwash plains	No	---
	Fairhaven	10	Outwash plains	No	---
	Spillco, occasionally flooded	10	Flood plains	No	---
P11A: Dempster silt loam, 0 to 2 percent slopes	Dempster	90	Outwash plains	No	---
	Graceville	10	Outwash plains	No	---
P11B: Dempster silt loam, 2 to 6 percent slopes	Dempster	90	Outwash plains	No	---
	Graceville	10	Outwash plains	No	---

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>P12B:</b>					
Everly silty clay loam, 2 to 6 percent slopes	Everly	80	Till plains	No	---
	Sac	10	Till plains	No	---
	Ransom	5	Till plains	No	---
	Wilmonton	5	Till plains	No	---
<b>P12C2:</b>					
Everly silty clay loam, 6 to 12 percent slopes, moderately eroded	Everly, moderately eroded	80	Till plains	No	---
	Everly	10	Till plains	No	---
	Moneta	5	Till plains	No	---
	Wilmonton	5	Till plains	No	---
<b>P14A:</b>					
Flandreau silt loam, 0 to 2 percent slopes	Flandreau	90	Outwash plains	No	---
	Grovena	10	Outwash plains	No	---
<b>P14B:</b>					
Flandreau silt loam, 2 to 6 percent slopes	Flandreau	80	Outwash plains	No	---
	Grovena	10	Outwash plains	No	---
	Thurman	10	Outwash plains	No	---
<b>P16A:</b>					
Graceville silt loam, 0 to 2 percent slopes	Graceville	90	Outwash plains	No	---
	Dempster	10	Outwash plains	No	---
<b>P17A:</b>					
Ihlen silty clay loam, 0 to 2 percent slopes	Ihlen	93	Till plains	No	---
	Bluemound	3	Till plains	No	---
	Soils that are deep to bedrock	3	Till plains	No	---
	Rock outcrop	1	Till plains		---

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<b>P17B:</b>					
Ihlen silty clay loam, 2 to 6 percent slopes	Ihlen	80	Till plains	No	---
	Bluemound	10	Till plains	No	---
	Rock outcrop	5	Till plains		---
	Soils that are deep to bedrock	5	Till plains	No	---
<b>P18B:</b>					
Ihlen-Rock outcrop complex, 0 to 6 percent slopes	Ihlen	55	Till plains	No	---
	Rock outcrop	25	Till plains		---
	Bluemound	10	Till plains	No	---
	Soils that are deep to bedrock	10	Till plains	No	---
<b>P18C:</b>					
Ihlen-Rock outcrop complex, 4 to 35 percent slopes	Ihlen	45	Till plains	No	---
	Rock outcrop	40	Till plains		---
	Bluemound	10	Till plains	No	---
	Soils that are deep to bedrock	3	Till plains	No	---
	Spillco, occasionally flooded	2	Flood plains	No	---
<b>P20B:</b>					
Judson silt loam, 3 to 8 percent slopes	Judson	80	Till plains	No	---
	Primghar	10	Till plains	No	---
	Galva	5	Till plains	No	---
	Whitewood, overwash	5	Till plains	No	---

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<b>P24B:</b>					
Moody silty clay loam, 2 to 5 percent slopes	Moody	85	Till plains	No	---
	Primghar	10	Till plains	No	---
	Nora, moderately eroded	3	Till plains	No	---
	Splitrock	2	Till plains	No	---
<b>P27A:</b>					
Primghar silty clay loam, 1 to 3 percent slopes					
<b>P28A:</b>					
Ransom silty clay loam, 1 to 3 percent slopes	Ransom	80	Till plains	No	---
	Rushmore	8	Till plains	Yes	2B3
	Sac	8	Till plains	No	---
	Primghar	4	Till plains	No	---
<b>P29A:</b>					
Rushmore silty clay loam, 0 to 2 percent slopes	Rushmore	80	Till plains	Yes	2B3
	Ransom	10	Till plains	No	---
	Whitewood, frequently flooded	10	Till plains	Yes	2B3
<b>P30B:</b>					
Sac silty clay loam, 2 to 5 percent slopes	Sac	80	Till plains	No	---
	Annieville	10	Till plains	No	---
	Primghar	5	Till plains	No	---
	Ransom	5	Till plains	No	---
<b>P32A:</b>					
Spillco silt loam, 0 to 2 percent slopes, frequently flooded	Spillco, frequently flooded	85	Flood plains	Yes	4
	Spillco, occasionally flooded	10	Flood plains	No	---
	Havelock, frequently flooded	5	Flood plains	Yes	2B3, 4

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<b>P33A:</b>					
Spillco silt loam, 0 to 2 percent slopes, occasionally flooded	Spillco, occasionally flooded	85	Flood plains	No	---
	Spillco, frequently flooded	10	Flood plains	Yes	4
	Comfrey, occasionally flooded	5	Flood plains	Yes	2B3
<b>P34B:</b>					
Splitrock silty clay loam, 2 to 5 percent slopes	Splitrock	82	Till plains	No	---
	Primghar	10	Till plains	No	---
	Soils that are deep to till	8	Till plains	No	---
<b>P34C2:</b>					
Splitrock silty clay loam, 5 to 9 percent slopes, moderately eroded	Splitrock, moderately eroded	80	Till plains	No	---
	Splitrock	10	Till plains	No	---
	Primghar	5	Till plains	No	---
	Soils that are deep to till	5	Till plains	No	---
<b>P36A:</b>					
Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded	Talcot, occasionally flooded	85	Outwash plains	Yes	2B3
	Biscay, occasionally flooded	10	Outwash plains	Yes	2B3
	Cylinder, occasionally flooded	5	Outwash plains	No	---
<b>P37B:</b>					
Talmo gravelly sandy loam, 2 to 6 percent slopes	Talmo	90	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Thurman	5	Outwash plains	No	---
<b>P37D:</b>					
Talmo gravelly sandy loam, 6 to 35 percent slopes	Talmo	90	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Thurman	5	Outwash plains	No	---

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<b>P38B:</b>					
Thurman sandy loam, 2 to 6 percent slopes	Thurman	90	Outwash plains	No	---
	Henkin	10	Outwash plains	No	---
<b>P42A:</b>					
Whitewood silty clay loam, 0 to 2 percent slopes	Whitewood	70	Till plains	Yes	2B3
	Whitewood, frequently flooded	10	Till plains	Yes	2B3
	Whitewood, overwash	10	Till plains	No	---
	Primghar	9	Till plains	No	---
	Wakonda	1	Till plains	No	---
<b>P44E:</b>					
Shindler clay loam, 15 to 45 percent slopes	Shindler	85	Till plains	No	---
	Judson	10	Till plains	No	---
	Soils that are moderately deep to carbonates	5	Till plains	No	---
<b>P46:</b>					
Trent silty clay loam, 1 to 3 percent slopes	Trent	78	Drainageways	No	---
	Moody	14	Hillslopes	No	---
	Splitrock	4	Hillslopes	No	---
	Whitewood	4	Drainageways	Yes	2B3
<b>P48A:</b>					
Allendorf silty clay loam, 0 to 2 percent slopes	Allendorf	85	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Sac	5	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---

# Hydric Soils

Pipestone County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>P48B:</b>					
Allendorf silty clay loam, 2 to 6 percent slopes	Allendorf	85	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Sac	5	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---
<b>P56B:</b>					
Kanaranzi silt loam, 2 to 6 percent slopes	Kanaranzi	80	Outwash plains	No	---
	Allendorf	14	Outwash plains	No	---
	Talmo	6	Outwash plains	No	---
<b>U3B:</b>					
UDORTHENTS (CUT AND FILL LAND), 0 TO 6 PERCENT SLOPES	Udorthents, (cut and fill land)	100	Moraines		---
<b>W:</b>					
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 Folist.
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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