

Table Appendix.3-1 is a description of all MLCCS cover types. These are incorporated into the District’s interactive GIS tool.

Figure IV.Appendix.3-1 (after the table) illustrates the Minnesota Land Cover Classification System cover types to Level 3 for the entire MCWD.

**Table Appendix.3-1
Minnesota Land Cover Classification System (from Minnesota DNR)**

10000	Artificial Surfaces and Associated Areas
11000	Artificial surfaces with trees as the dominant vegetation cover (25% to 96% vegetation cover)
11100	Artificial surfaces with coniferous trees
11110	4% to 10% impervious cover with coniferous trees
11111	Jack pine (forest or woodland) with 4-10% impervious cover
11112	White/red pine (forest) with 4-10% impervious cover
11113	Spruce-fir (forest) with 4-10% impervious cover
11114	Eastern red cedar (woodland) with 4-10% impervious cover
11115	Northern conifer (woodland) with 4-10% impervious cover
11116	Planted red pine with 4-10% impervious cover
11117	Planted white pine with 4-10% impervious cover
11118	Planted spruce/fir with 4-10% impervious cover
11119	Other planted conifers with 4-10% impervious cover
11120	11% to 25% impervious cover with coniferous trees
11121	Jack pine (forest or woodland) with 11- 25% impervious cover
11122	White/red pine (forest) with 11- 25% impervious cover
11123	Spruce-fir (forest) with 11- 25% impervious cover
11124	Eastern red cedar (woodland) with 11- 25% impervious cover
11125	Northern conifer (woodland) with 11- 25% impervious cover
11126	Planted red pine with 11- 25% impervious cover
11127	Planted white pine with 11- 25% impervious cover
11128	Planted spruce/fir with 11- 25% impervious cover
11129	Other planted conifers with 11- 25% impervious cover
11130	26% to 50% impervious cover with coniferous trees
11131	Jack pine (forest or woodland) with 26-50% impervious cover
11132	White/red pine (forest) with 26-50% impervious cover
11133	Spruce-fir (forest) with 26-50% impervious cover
11134	Eastern red cedar (woodland) with 26-50% impervious cover
11135	Northern conifer (woodland) with 26-50% impervious cover
11136	Planted red pine with 26-50% impervious cover
11137	Planted white pine with 26-50% impervious cover
11138	Planted spruce/fir with 26-50% impervious cover
11139	Other planted conifers with 26-50% impervious cover

11140 51% to 75% impervious cover with coniferous trees

- 11141 Jack pine (forest or woodland) with 51-75% impervious cover
- 11142 White/red pine (forest) with 51-75% impervious cover
- 11143 Spruce-fir (forest) with 51-75% impervious cover
- 11144 Eastern red cedar (woodland) with 51-75% impervious cover
- 11145 Northern conifer (woodland) with 51-75% impervious cover
- 11146 Planted red pine with 51-75% impervious cover
- 11147 Planted white pine with 51-75% impervious cover
- 11148 Planted spruce/fir with 51-75% impervious cover
- 11149 Other planted conifers with 51-75% impervious cover

11200 Artificial surfaces with deciduous tree cover

11210 4% to 10% impervious cover with deciduous trees

- 11211 Oak (forest or woodland) with 4-10% impervious cover
- 11212 Northern hardwood (forest) with 4-10% impervious cover
- 11213 Maple-basswood (forest) with 4-10% impervious cover
- 11214 Boxelder-green ash (forest) with 4-10% impervious cover
- 11215 Aspen-birch (forest) with 4-10% impervious cover
- 11216 Aspen (forest, woodland) with 4-10% impervious cover
- 11217 Planted ash with 4-10% impervious cover
- 11218 Planted oak with 4-10% impervious cover
- 11219 Other deciduous trees with 4-10% impervious cover

11220 11% to 25% impervious cover with deciduous trees

- 11221 Oak (forest or woodland) with 11- 25% impervious cover
- 11222 Northern hardwood (forest) with 11- 25% impervious cover
- 11223 Maple-basswood (forest) with 11- 25% impervious cover
- 11224 Boxelder-green ash (forest) with 11- 25% impervious cover
- 11225 Aspen-birch (forest) with 11- 25% impervious cover
- 11226 Aspen (forest, woodland) with 11- 25% impervious cover
- 11227 Planted ash with 11- 25% impervious cover
- 11228 Planted oak with 11- 25% impervious cover
- 11229 Other deciduous trees with 11- 25% impervious cover

11230 26% to 50% impervious cover with deciduous trees

- 11231 Oak (forest or woodland) with 26-50% impervious cover
- 11232 Northern hardwood (forest) with 26-50% impervious cover
- 11233 Maple-basswood (forest) with 26-50% impervious cover
- 11234 Boxelder-green ash (forest) with 26-50% impervious cover
- 11235 Aspen-birch (forest) with 26-50% impervious cover
- 11236 Aspen (forest, woodland) with 26-50% impervious cover
- 11237 Planted ash with 26-50% impervious cover
- 11238 Planted oak with 26-50% impervious cover
- 11239 Other deciduous trees with 26-50% impervious cover

11240 51% to 75% impervious cover with deciduous trees

- 11241 Oak (forest or woodland) with 51-75% impervious cover
- 11242 Northern hardwood (forest) with 51-75% impervious cover
- 11243 Maple-basswood (forest) with 51-75% impervious cover
- 11244 Boxelder-green ash (forest) with 51-75% impervious cover
- 11245 Aspen-birch (forest) with 51-75% impervious cover

11246	Aspen (forest, woodland) with 51-75% impervious cover
11247	Planted ash with 51-75% impervious cover
11248	Planted oak with 51-75% impervious cover
11249	Other deciduous trees with 51-75% impervious cover
11300	Artificial surfaces with mixed coniferous and deciduous tree cover
11310	4% to 10% impervious cover with mixed coniferous/deciduous trees
11311	Mixed pine-hardwood (forest) with 4-10% impervious cover
11312	White pine-hardwood (forest) with 4-10% impervious cover
11313	Northern hardwood-conifer (forest) with 4-10% impervious cover
11314	Planted mixed coniferous/deciduous trees with 4-10% impervious cover
11320	11% to 25% impervious cover with mixed coniferous/deciduous trees
11321	Mixed pine-hardwood (forest) with 11-25% impervious cover
11322	White pine-hardwood (forest) with 11-25% impervious cover
11323	Northern hardwood-conifer (forest) with 11-25% impervious cover
11324	Planted mixed coniferous/deciduous trees with 11-25% impervious cover
11330	26% to 50% impervious cover with mixed coniferous/deciduous trees
11331	Mixed pine-hardwood (forest) with 26-50% impervious cover
11332	White pine-hardwood (forest) with 26-50% impervious cover
11333	Northern hardwood-conifer (forest) with 26-50% impervious cover
11334	Planted mixed coniferous/deciduous trees with 26-50% impervious cover
11340	51% to 75% impervious cover with mixed coniferous/deciduous trees
11341	Mixed pine-hardwood (forest) with 51-75% impervious cover
11342	White pine-hardwood (forest) with 51-75% impervious cover
11343	Northern hardwood-conifer (forest) with 51-75% impervious cover
11344	Planted mixed coniferous/deciduous trees with 51-75% impervious cover
12000	Artificial surfaces with coniferous and/or deciduous shrub dominant vegetation (25% to 96% vegetation cover)
12100	Artificial surfaces with coniferous and/or deciduous shrubs
12110	4% to 10% impervious cover with coniferous and/or deciduous shrubs
12111	Short grasses with planted coniferous and/or deciduous shrubs, 4-10% impervious cover
12112	Long grasses with planted coniferous and/or deciduous shrubs, 4-10% impervious cover
12113	Other coniferous and/or deciduous shrubs with 4-10% impervious cover
12120	11% to 25% impervious cover with coniferous and/or deciduous shrubs
12121	Short grasses with planted coniferous and/or deciduous shrubs, 11-25% impervious cover
12122	Long grasses with planted coniferous and/or deciduous shrubs, 11-25% impervious cover

12123	Other coniferous and/or deciduous shrubs, 11-25% impervious cover
12130	26% to 50% impervious cover with coniferous and/or deciduous shrubs
12131	Short grasses with planted coniferous and/or deciduous shrubs, 26-50% impervious cover
12132	Long grasses with planted coniferous and/or deciduous shrubs, 26-50% impervious cover
12133	Other coniferous and/or deciduous shrubs, 26-50% impervious cover
12140	51% to 75% impervious cover with coniferous and/or deciduous shrubs
12141	Short grasses with planted coniferous and/or deciduous shrubs, 51-75% impervious cover
12142	Long grasses with planted coniferous and/or deciduous shrubs, 51-75% impervious cover
12143	Other coniferous and/or deciduous shrubs, 51-75% impervious cover
12200	Artificial surfaces with coniferous and/or deciduous shrubs with sparse trees
12210	4% to 10% impervious cover with coniferous and/or deciduous shrubs and sparse trees
12211	Oak woodland brushland with 4-10% impervious cover
12212	Other coniferous and/or deciduous shrubs and trees with 4-10% impervious cover
12220	11% to 25% impervious cover with coniferous and/or deciduous shrubs and sparse trees
12221	Oak woodland brushland with 11-25% impervious cover
12222	Other coniferous and/or deciduous shrubs and trees with 11-25% impervious cover
12230	26% to 50% impervious cover with coniferous and/or deciduous shrubs and sparse trees
12231	Oak woodland brushland with 26-50% impervious cover
12232	Other coniferous and/or deciduous shrubs and trees with 26-50% impervious cover
12240	51% to 75% impervious cover with coniferous and/or deciduous shrubs and sparse trees
12241	Oak Woodland brushland with 51-75% impervious cover
12242	Other coniferous and/or deciduous shrubs and trees with 51-75% impervious cover
13000	Artificial surfaces with herbaceous dominant vegetation (25% to 96% vegetation cover)
13100	Artificial surfaces with perennial grasses with sparse trees (trees >10%)
13110	4% to 10% impervious cover with perennial grasses and sparse trees
13111	Jack pine barrens with 4-10% impervious cover
13112	Oak savanna with 4-10% impervious cover
13113	Aspen openings with 4-10% impervious cover
13114	Short grasses and mixed trees with 4-10% impervious cover
13115	Long grasses and mixed trees with 4-10% impervious cover

13120	11% to 25% impervious cover with perennial grasses and sparse trees
13121	Jack pine barrens with 11-25% impervious cover
13122	Oak savanna with 11-25% impervious cover
13123	Aspen openings with 11-25% impervious cover
13124	Short grasses and mixed trees with 11-25% impervious cover
13125	Long grasses and mixed trees with 11-25% impervious cover
13130	26% to 50% impervious cover with perennial grasses and sparse trees
13131	Jack pine barrens with 26-50% impervious cover
13132	Oak savanna with 26-50% impervious cover
13133	Aspen openings with 26-50% impervious cover
13134	Short grasses and mixed trees with 26-50% impervious cover
13135	Long grasses and mixed trees with 26-50% impervious cover
13140	51% to 75% impervious cover with perennial grasses and sparse trees
13141	Jack pine barrens with 51-75% impervious cover
13142	Oak savanna with 51-75% impervious cover
13143	Aspen openings with 51-75% impervious cover
13144	Short grasses and mixed trees with 51-75% impervious cover
13145	Long grasses and mixed trees with 51-75% impervious cover
13200	Artificial surfaces with perennial grasses
13210	4% to 10% impervious cover with perennial grasses
13211	Short grasses with 4-10% impervious cover
13212	Non-native dominated long grasses with 4-10% impervious cover
13213	Mesic prairie with 4-10% impervious cover
13214	Dry prairie with 4-10% impervious cover
13220	11% to 25% impervious cover with perennial grasses
13221	Short grasses with 11-25% impervious cover
13222	Non-native dominated long grasses with 11-25% impervious cover
13223	Mesic prairie with 11-25% impervious cover
13224	Dry prairie with 11-25% impervious cover
13230	26% to 50% impervious cover with perennial grasses
13231	Short grasses with 26-50% impervious cover
13232	Non-native dominated long grasses with 26-50% impervious cover
13233	Mesic prairie with 26-50% impervious cover
13234	Dry prairie with 26-50% impervious cover
13240	51% to 75% impervious cover with perennial grasses
13241	Short grasses with 51-75% impervious cover
13242	Non-native dominated long grasses with 51-75% impervious cover
13243	Mesic prairie with 51-75% impervious cover
13244	Dry prairie with 51-75% impervious cover
13300	Artificial surfaces with cultivated herbaceous vegetation (Gardens)
13310	4% to 10% impervious cover with cultivated herbaceous vegetation
13311	Vegetables with 4-10% impervious cover

13312	Forbs (flowers) with 4-10% impervious cover
13320	11% to 25% impervious cover with cultivated herbaceous vegetation
13321	Vegetables with 11-25% impervious cover
13322	Forbs (flowers) with 11-25% impervious cover
13330	26% to 50% impervious cover with cultivated herbaceous vegetation
13331	Vegetables with 26-50% impervious cover
13332	Forbs (flowers) with 26-50% impervious cover
13340	51% to 75% impervious cover with cultivated herbaceous vegetation
13341	Vegetables with 51-75% impervious cover
13342	Forbs (flowers)with 51-75% impervious cover
14000	Artificial surfaces with less than 25% vegetation cover
14100	Buildings and/or pavement
14110	76% to 90% impervious cover
14111	Buildings with 76-90% impervious cover
14112	Pavement with 76-90% impervious cover
14113	Buildings and pavement with 76-90% impervious cover
14120	91% to 100% impervious cover
14121	Buildings with 91-100% impervious cover
14122	Pavement with 91-100% impervious cover
14123	Buildings and pavement with 91-100% impervious cover
14200	Exposed earth
14210	0% to 10% impervious cover-exposed earth
14211	Mines with 0-10% impervious cover
14212	Sand and gravel pits with 0-10% impervious cover
14213	Landfill with 0-10% impervious cover
14214	Other exposed/transitional land with 0-10% impervious cover
14220	11% to 25% impervious cover-exposed earth
14221	Mines with 11-25% impervious cover
14222	Sand and gravel pits with 11-25% impervious cover
14223	Landfill with 11-25% impervious cover
14224	Other exposed/transitional land with 11-25% impervious cover
14230	26% to 50% impervious cover-exposed earth
14231	Mines with 26-50% impervious cover
14232	Sand and gravel pits with 26-50% impervious cover
14233	Landfill with 26-50% impervious cover
14234	Other exposed/transitional land with 26-50% impervious cover.

20000	Planted or Cultivated Vegetation (greater than 96% vegetation cover)
21000	Planted, maintained or cultivated tree vegetation
21100	Planted, maintained or cultivated coniferous trees
21110	Upland soils with planted, maintained, or cultivated coniferous trees
21111	Spruce/fir trees on upland soils
21112	White pine trees on upland soils
21113	Red pine trees on upland soils
21114	Coniferous trees on upland soils
21200	Planted, maintained or cultivated deciduous trees
21210	Upland soils with planted, maintained or cultivated deciduous trees
21211	Fruit trees (apple, cherry, plum, etc) on upland soils
21212	Walnut trees on upland soils
21213	Deciduous trees on upland soils
21300	Planted, maintained or cultivated mixed coniferous and deciduous trees
21310	Upland soils with planted, maintained or cultivated mixed coniferous/deciduous trees
21320	Hydric soils with planted, maintained or cultivated mixed coniferous/deciduous trees
22000	Planted, maintained or cultivated shrub and/or vine vegetation
22100	Planted, maintained or cultivated coniferous shrubs
22110	Upland soils with planted, maintained or cultivated coniferous shrubs
22120	Hydric soils with planted, maintained or cultivated coniferous shrubs
22200	Planted, maintained or cultivated deciduous shrub/vine vegetation
22210	Upland soils with planted, maintained or cultivated deciduous shrub/vine vegetation
22211	Blackberry
22212	Blueberry
22213	Grape
22214	Raspberry-black
22215	Raspberry-red
22216	Other shrub/vine vegetation
22220	Artificially flooded or saturated soils
22221	Cranberry

22300	Planted, maintained or cultivated mixed coniferous-deciduous shrub/vine vegetation
22310	Upland soils with planted, maintained or cultivated mixed coniferous-deciduous shrub/vine vegetation
22320	Hydric soils with planted, maintained or cultivated mixed coniferous-deciduous shrub/vine vegetation
23000	Planted or maintained herbaceous vegetation
23100	Planted or maintained grasses with sparse tree cover
23110	Upland soils with planted or maintained grasses and sparse tree cover
23111	Short grasses with sparse tree cover on upland soils
23112	Long grasses with sparse tree cover on upland soils
23120	Hydric soils with planted or maintained grasses and sparse tree cover
23121	Short grasses with sparse tree cover on hydric soils
23122	Long grasses with sparse tree cover on hydric soils
23200	Planted or maintained grasses
23210	Upland soils with planted or maintained grasses
23211	Short grasses on upland soils
23212	Long grasses on upland soils
23220	Hydric soils with planted or maintained grasses
23221	Short grasses on hydric soils
23222	Long grasses on hydric soils
23300	Planted or maintained grasses and forbs
23310	Upland soils with planted or maintained grasses and forbs
23311	Short grasses and forbs on upland soils
23312	Long grasses and forbs on upland soils
23320	Hydric soils with planted grasses and forbs
23321	Short grasses and forbs on hydric soils
23322	Long grasses and forbs on hydric soils
24000	Cultivated herbaceous vegetation
24100	Row cropland
24110	Upland soils - cropland
24111	Beans (all types except soybeans)
24112	Corn
24113	Sorghum
24114	Soybeans
24115	Sugar beets
24116	Potato
24117	Pumpkins
24118	Sunflowers
24119	Other vegetable and truck crops

24120	Hydric soils - row cropland
24121	Beans (all types except soybeans) on hydric soils
24122	Corn on hydric soils
24123	Sorghum on hydric soils
24124	Soybeans on hydric soils
24125	Sugar beets on hydric soils
24126	Potato on hydric soils
24127	Pumpkins on hydric soils
24128	Sunflowers on hydric soils
24129	Other vegetable and truck crops on hydric soils
24200	Close grown or solid seeded cropland
24210	Upland soils - close grown cropland
24211	Wheat
24212	Oats
24213	Barley
24214	Sod
24215	Not planted
24216	Fallow
24217	Hayfield
24218	All other close grown cropland on upland soils
24220	Hydric soils - close grown cropland
24221	Wheat on hydric soils
24222	Oats on hydric soils
24223	Rice on hydric soils
24224	Barley on hydric soils
24225	Sod on hydric soils
24226	Not planted on hydric soils
24227	Fallow hydric soils
24228	Hayfield on hydric soils
24229	All other close grown cropland on hydric soils
24230	Artificially flooded or saturated soils - close grown cropland
24231	Rice

30000	Forests
31000	Coniferous forest
31100	Upland coniferous forest
31110	Black spruce-feathermoss forest
31120	Jack pine forest
31121	Jack pine forest jack pine-fir subtype
31122	Jack pine forest hazel subtype
31123	Jack pine forest jack pine-oak subtype
31124	Jack pine forest jack pine-black spruce subtype
31125	Jack pine forest blueberry subtype
31130	Red pine forest

31140	White pine forest
31150	Upland white cedar forest
31151	Upland white cedar forest wet-mesic subtype
31152	Upland white cedar forest mesic subtype
31160	Spruce-fir forest
31161	Spruce-fir forest white spruce-balsam fir subtype
31162	Spruce-fir forest fir-birch subtype
31200	Saturated coniferous forest [PFO4B]
31210	Tamarack swamp
31211	Tamarack swamp seepage subtype
31212	Tamarack swamp minerotrophic subtype
31213	Tamarack swamp sphagnum subtype
31220	White cedar swamp [PFO3]
31221	White cedar swamp seepage subtype
31230	Black spruce swamp [PFO4]
31240	Black spruce bog
31241	Black spruce bog intermediate subtype
31242	Black spruce bog raised subtype
32000	Deciduous forest
32100	Upland deciduous forest
32110	Oak forest
32111	Oak forest red maple subtype
32112	Oak forest mesic subtype
32113	Oak forest dry subtype
32120	Northern hardwood forest
32130	Paper birch forest
32131	Paper birch forest northern hardwoods subtype
32132	Paper birch forest spruce-fir subtype
32140	Aspen-birch forest
32141	Aspen-birch forest northern hardwoods subtype
32142	Aspen-birch forest spruce-fir subtype
32150	Maple-basswood forest
32160	Aspen forest
32170	Boxelder - green ash disturbed native forest
32200	Temporarily flooded deciduous forest [PFO1A]
32210	Floodplain forest [PFO1]
32211	Floodplain forest silver maple subtype
32212	Floodplain forest swamp white oak subtype
32220	Lowland hardwood forest
32230	Aspen forest temporarily flooded
32300	Saturated deciduous forest [PFO1B]
32310	Black Ash swamp
32311	Black Ash swamp seepage subtype
32320	Mixed hardwood swamp
32321	Mixed hardwood swamp seepage subtype
32330	Aspen forest saturated

32400	Seasonally flooded deciduous forest [PFO1C]
32410	Black Ash swamp - seasonally flooded
32420	Mixed hardwood swamp - seasonally flooded
33000	Mixed coniferous-deciduous forest
33100	Upland mixed coniferous - deciduous forest
33110	Mixed pine-hardwood forest
33120	Boreal hardwood - conifer forest
33130	Northern hardwood-conifer forest
33131	Northern hardwood-conifer forest yellow birch-white cedar subtype
33140	White pine-hardwood forest
33141	White pine-hardwood forest dry subtype
33142	White pine-hardwood forest mesic subtype

40000	Woodland - Open stands of trees with crowns not usually touching (generally forming 25 - 60% cover)
41000	Coniferous woodland
41100	Upland coniferous woodland
41110	Jack pine woodland
41120	Northern conifer woodland
41130	Eastern Red Cedar woodland
42000	Deciduous woodland
42100	Upland deciduous woodland
42110	Aspen woodland
42120	Oak woodland-brushland
42130	Disturbed deciduous woodland
43000	Mixed coniferous-deciduous woodland
43100	Upland mixed coniferous-deciduous woodland
43110	Disturbed mixed woodland
50000	Shrubland
51000	Coniferous / evergreen shrubland
51100	Saturated needle-leaved or microphyllous evergreen [PSS4B]
51110	Open sphagnum bog
51111	Open sphagnum bog intermediate subtype
51112	Open sphagnum bog raised subtype
51200	Saturated coniferous (deciduous tamarack) shrubland [PSS2B]
51210	Scrub tamarack poor fen
52000	Deciduous shrubland

52100	Upland deciduous shrubland
52110	Mesic brush-prairie
52111	Mesic brush-prairie, sand-gravel subtype
52120	Native dominated upland shrubland
52130	Non-native dominated upland shrubland
52200	Temporarily flooded deciduous woodland [PSS1A]
52210	Native dominated temporarily flooded shrubland
52220	Non-native dominated temporarily flooded shrubland
52300	Saturated deciduous shrubland [PSS1B]
52310	Shrub fen
52311	Poor fen shrub subtype
52312	Rich fen shrub subtype
52320	Wet brush-prairie
52321	Wet brush-prairie seepage subtype
52330	Non-native dominated saturated shrubland
52400	Seasonally flooded deciduous shrubland [PSS1C]
52410	Alder swamp
52420	Wet meadow shrub subtype
52430	Willow swamp
52440	Non-native dominated seasonally flooded shrubland

60000	Herbaceous (>25% cover)
61000	Grassland or emergent vegetation
61100	Tall grassland
61110	Mesic prairie
61111	Mesic prairie carbonate bedrock subtype
61112	Mesic prairie crystalline bedrock subtype
61120	Tall grass non-native dominated grassland
61200	Medium-tall grassland
61210	Dry Prairie
61211	Dry Prairie barrens subtype
61212	Dry Prairie bedrock bluff subtype
61213	Dry Prairie sand-gravel subtype
61214	Dry Prairie hill subtype
61220	Medium-tall grass non-native dominated grassland
61300	Temporarily flooded graminoid vegetation [PEMA]
61310	Wet prairie
61311	Wet prairie saline subtype
61320	Wet meadow - temporarily flooded soils
61330	Temporarily flooded non-native dominated grassland
61400	Saturated graminoid vegetation [PEMB, PMLB]
61410	Wet prairie - saturated soils
61411	Wet prairie saline subtype - saturated soils
61412	Wet prairie seepage subtype - saturated soils

61420	Wet meadow
61430	Cattail marsh - saturated soils
61440	Calcareous seepage fen
61441	Calcareous seepage fen boreal subtype
61442	Calcareous seepage fen prairie subtype
61450	Poor fen
61451	Poor fen sedge subtype
61452	Poor fen patterned fen subtype
61460	Rich fen
61461	Rich fen sedge subtype
61462	Rich fen floating-mat subtype
61463	Rich fen patterned fen subtype
61470	Open bog
61471	Open sphagnum bog schlenke subtype
61472	Graminoid bog
61480	Saturated non-native dominated graminoid vegetation
61500	Seasonally flooded emergent vegetation [PEMC]
61510	Cattail marsh - seasonally flooded
61520	Mixed emergent marsh - seasonally flooded
61530	Seasonally flooded non-native dominated emergent vegetation
61600	Semipermanently flooded emergent vegetation [PEMF, L2EM2F]
61610	Cattail marsh
61620	Mixed emergent marsh
61630	Semipermanently flooded non-native dominated vegetation
61700	Intermittently exposed emergent vegetation [PEMG, L2EM2G]
61710	Cattail marsh - intermittently exposed
61720	Mixed emergent marsh - intermittently exposed
61730	Intermittently exposed non-native dominated vegetation
61800	Permanently flooded emergent vegetation [L2EM2H]
61810	Cattail marsh - permanently flooded
61820	Mixed emergent marsh - permanently flooded
61830	Permanently flooded non-native dominated vegetation
62000	Grassland with sparse tree layer (trees >10%)
62100	Grassland with sparse deciduous trees
62110	Aspen openings
62111	Aspen openings sand gravel subtype
62120	Dry oak savanna
62121	Dry oak savanna hill subtype
62122	Dry oak savanna barrens subtype
62123	Dry oak savanna sand-gravel subtype
62130	Mesic oak savanna

62140	Grassland with sparse deciduous trees - non-native (herbaceous) dominated vegetation
62200	Grassland with sparse conifer or mixed deciduous/coniferous trees
62210	Jack pine barrens
62220	Grassland with sparse conifer or mixed deciduous/coniferous trees - non-native dominated vegetation
63000	Perennial forb vegetation
63100	Upland forb vegetation
63110	Talus slope algific subtype
63200	Saturated forb vegetation [PEMB]
63210	Seepage meadow
64000	Hydromorphic rooted vegetation
64100	Standing water hydromorphic rooted vegetation [L2ABH, L2ABF, L2ABG, PABG, PABH, PABF]
64110	Water lily
64111	Water Lily Open Marsh
64112	Boreal Water Lily Aquatic Wetland
64113	Northern Water Lily Aquatic Wetland
64120	Midwest Pondweed Submerged Aquatic Wetland
65000	Annual grasslands or forb vegetation
65100	Seasonally flooded annual forb vegetation [PEMC]
65110	Slender Glasswort Saline Meadow
70000	Nonvascular Vegetation
71000	Lichen vegetation
71100	Lichen vegetation with sparse tree layer
71110	Northern conifer scrubland
80000	Sparse Vegetation
81000	Consolidated Rock (cliffs, bedrock, etc.)
81100	Cliffs with Sparse Vegetation
81110	Open Cliff
81111	Great Lakes Shore Basalt/Diabase Cliff
81112	Northern (Laurentian) Igneous/Metamorphic Dry Cliff
81113	Midwest Dry Limestone/Dolostone Cliff
81114	Midwest Sandstone Dry Cliff
81115	Midwest Sandstone Moist Cliff
81116	Great Lakes Shoreline Granite/Metamorphic Cliff
81120	Wet Cliff
81121	Moderate Cliff
81122	Midwest Sedimentary Dripping Cliff
81130	Rock Outcrop / Butte
81131	Northern (Laurentian) Granite/Metamorphic Rock Outcrop

81132	Midwest Quartzite - Granite Rock Outcrop
81200	Level Bedrock with Sparse Vegetation
81210	Open Level Bedrock
81211	Inland Lake Igneous/Metamorphic Bedrock Shore
81212	Great Lakes Basalt (Conglomerate) Bedrock Lakeshore
81213	Great Lakes Limestone-Dolostone Bedrock Lakeshore
81214	Great Lakes Sandstone Bedrock Shore
81215	River Ledge Sandstone Pavement
82000	Boulder, Gravel, Cobble, or Talus
82100	Lowland or Submontane Talus / Scree Slopes
82110	Lowland Talus
82111	Northern Granite/Metamorphic Talus
82112	Midwest Limestone - Dolostone Talus
82113	Northern Sandstone Talus
82114	Northern Basalt/Diabase Open Talus
82200	Cobble / Gravel Beaches and Shores
82210	Cobble / Gravel Shore
82211	Great Lakes Basalt/Diabase Cobble-gravel Lakeshore
82212	Riverine Igneous/Metamorphic Cobble-gravel Shore
82213	Great Lakes Non-alkaline Cobble/Gravel Shore
82214	Inland Lake Igneous/Metamorphic Cobble-gravel Shore
83000	Unconsolidated Material (soil, sand, and ash)
83100	Sand Flats
83110	Inland Strand Beach
83111	Inland Freshwater Strand Beach
83200	Temporarily Flooded Sand Flats
83210	Sand Flats Temporarily Flooded
83211	Lacustrine Sand Flats - Bars
83212	Riverine Sand Flats - Bars
83300	Seasonally / Temporarily Flooded Mud Flats
83310	Non-tidal Mud Flat Seasonally / Temporarily Flooded
83311	Lake Mud Flats
83312	River Mud Flats
83313	Saline Spring Mud Flats
90000	Open Water
91000	River (riverine)
91100	Slow moving linear open water habitat [R2UB]
91200	Fast moving linear open water habitat [R3UB]
92000	Lake (lacustrine)
92100	Limnetic Open Water [L1UBH] (>6.6')
92200	Semipermanently flooded littoral aquatic bed [L2ABF]

92210	Floating algae - Semipermanently flooded littoral aquatic bed [L2AB1F]
92220	Floating vascular vegetation - Semipermanently flooded littoral aquatic bed [L2AB4F]
92300	Intermittently exposed littoral aquatic bed [L2ABG]
92310	Floating algae - Intermittently exposed littoral aquatic bed [L2AB1G]
92320	Floating vascular vegetation - Intermittently exposed littoral aquatic bed [L2AB4H]
92400	Permanently flooded littoral aquatic bed [L2ABH]
92410	Floating algae - Permanently flooded littoral aquatic bed [L2AB1H]
92420	Floating vascular vegetation - Permanently flooded littoral aquatic bed [L2AB4H]
92500	Littoral Open water [L2UBG, L2UBH] (<6.6')
93000	Wetland-Open Water (palustrine)
93100	Intermittently exposed aquatic bed [PABG]
93110	Floating algae - Intermittently exposed aquatic bed [PAB1G]
93120	Floating vascular vegetation - Intermittently exposed aquatic bed [PAB4G]
93200	Permanently flooded aquatic bed [PABH]
93210	Floating algae [PAB1H]
93220	Floating vascular vegetation [PAB4H] PEMF]
93300	Open water [PUBF, PUBG, PUBH]