

Major Land Resource Area 057X

Northern Minnesota Gray Drift

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Ecological site keys

MLRA 57 Site Key

I. Soils formed in organic parent material

- A. Frequently very long duration ponding ... R057XY001MN – Marsh
- B. None to occasional, very brief to long duration ponding
 - i. Organic Material thickness 0-20 cm ... F057XY002MN – Wet Depressional Forest
 - ii. Organic material thickness 20-40 cm ... F057XY003MN – Peatland
 - iii. Organic material thickness greater than 40 cm
 - 1 Dominate pH is less than 4.5 within a depth of 130 cm ... F057XY004MN – Acid Peatland
 - 2 Dominate pH of 4.5 or more within a depth of 130 cm
 - a. Open vegetation concept (graminoid dominated) ... R057XY005MN – Open Peatland
 - b. Forested vegetation concept ... F057XY006MN – Forested Peatland

II. Soils formed in mineral parent material

- A. Prairie-influenced Upland Systems (mollic epipedon present)
 - i. Soil is 0-20" deep - shallow soil; gravelly and very gravelly textures within a depth of 50 cm (>15% gravel) ... R057XY008MN – Shallow Gravelly Prairie
 - ii. Soil is >20" deep - moderately deep to very deep
 - 1 Run-off position; gradients greater than 12% ... R057XY007MN – Steep Upland Prairie
 - 2 Neutral position; generally linear slopes; well-drained or drier; gradients 1-12%
 - a. Dominantly loamy and silty textures (loam, silt loam, silty clay loam, clay loam, silty clay loam, or very fine sandy loam) within a depth of 50 cm ... R057XY010MN – Loamy Prairie
 - b. Dominantly medium textures (sandy loam, fine sandy loam, or loamy very fine sand) within a depth of 50 cm ...
 - 3 Run-in position (swale, footslope, toeslope); gradients of 0-3%
 - a. Lower backslope and footslope position including upland swales ... R057XY013MN – Loamy Overflow
 - b. Footslope and toeslope positions, and linear upland drainageways; flooding and ponding may occur ... R057XY014MN – Linear Meadow
- B. Forest-Influenced Upland Systems (no mollic epipedon present)
 - i. Site in a floodplain- stream terraces, floodplain steps, alluvial flats, bar and channel topography; flooding occurs rarely to occasionally for brief duration ... F057XY016MN – Flood Plain Forest
 - ii. Site not in a floodplain
 - 1 Run-on position; footslopes, toe slopes, drainageways with gradients of 0-2% ... F057XY015MN – Wet Mixed Forest
 - 2 Run-off position; generally, short convex slopes; gradients >15%
 - a. Loamy textured soil (loam, silt loam, silty clay loam, clay loam, sandy clay loam, sandy loam, fine sandy loam, very fine sandy loam) within a depth of 50 cm ... F057XY017MN – Steep Loamy Upland

Forest

b. Sandy textured soil (sand, course sand, loamy sand, loamy course sand, fine sand, loamy fine sand) within a depth of 50 cm ... F057XY018MN – Steep Sandy Upland Forest

3 Neutral position; linear slopes with gradients of 1-15%

a. Soils with dense till (root restriction) within a depth of 150 cm; both loamy and sandy textures; generally less than 35 percent rock fragments with a depth of 100 cm ... F057XY019MN – Dense Till Upland Hardwood Forest

b. Soils without root restriction within a depth of 150 cm

1 Fine textured clayey and silty soils (clay, silty clay, silty clay loam, silty loam, very fine sandy loam, loamy very fine sand) within a depth of 50 cm; underlying material generally fine or medium textured till; generally less than 5% rock fragments within a depth of 100 cm ... F057XY020MN – Fine Upland Moist Hardwood Forest

2 Loamy textured soils (loam, sandy loam, sandy clay loam, fine sandy loam) within a depth of 50 cm; underlying material generally medium textured till, sandy loam till or stratified parent materials; generally less than 35 percent rock fragments within a depth of 100 cm ... F057XY021MN – Loamy Upland Moist Hardwood Forest

3 Medium textured soils (sandy loam, fine sandy loam, loam, very fine sandy loam, loamy very fine sand) within a depth of 50 cm; underlying material is coarse textured and generally has 5-35% rock fragments ... F057XY022MN – Sandy Upland Moist Mixed Forest

4 Coarse textured soils (sand, coarse sand, loamy sand, loamy coarse sand, fine sand, or loamy fine sand) within a depth of 50 CM; underlying materials generally coarse textured; generally 0-35% rock fragments; includes sand capped glacial till ... F057XY023MN – Dry Sandy Upland Coniferous Forest