Halfway River Sheet (94 B/NE)

Preliminary Map Legend

| Name of soil or land type | Map Symbol | Classification | P.M. | Texture of Control Section | Topography Class | Drainage |
|---|---|---|---|---|---|---|
| Alcan | Ac | O.GL 3.21 | till | c, cl | C-F | WD-MWD |
| Alluvial | Al | Cu.R 6.12 | alluvium | sl, l | C, e | WD-MWD |
| Beryl | By | Br.GL 3.21/3 | lacustrine | cl, sicl | D, c | WD |
| Bickford | Bi | Ty.M 8.21 | organic | peat | a,b,C | VPD |
| Branham | Br | O.EB 5.21 | outwash | sil | C, d | WD |
| Buick | Bu | LH.EG 7.32 | lacustrine & till | sicl | B-C | PD |
| Chowade | Cw | LiDg.Dy 5.42/9 | till | sl, gsl | C-H | WD |
| Cogol | Cg | Ty.M 8.21 | organic | peat | a, b | VPD |
| Donnelly | Do | O.GL 3.21 | lacustrine | c, cl | C-D | WD |
| Eroded | ER | (eroded phase of a soil) | | | | |
| Farrell | Fr | O.R 6.11 | alluvium | sil | B-C | WD |
| Fellers | Fe | Br.GL 3.21/3 | till | c, cl | f-g | MWD-WD |
| Goose | Go | R.HG 7.12 | lacustrine | c, cl | B-C | PD |
| Graham | Gr | Cu.R 6.12 | colluvium (+ till) | sl, l | E-G | MWD |
| Halfway | Hy | O.R-R.DG | alluvium | sl | B-C | WD |
| Horseshoe | Hs | Dg.DyB 5.42 | colluvium (+ till) | sl, gsl | E-G | WD-MWD |
| Jedney | Je | LiO.GL 3.21/9 | till | cl, l | C-F | MWD-ID |
| Judah | Ju | O.DG 1.41 | lacustrine | sicl | B,r,d | WD |
| Kenzie L | Kz | T.M (sph. 821 phase) | organic | peat | a,b | VPD |
| Lynx | Ly | Br.GL 3.21/3 | outwash | sil | B,c-e | WD |
| Murdale | Mu | SO.DG 1.41-2.22 | till | cl | C-D | WD |
| Nig | Ng | R.HG 7.12 | lacustrine | c, cl | C, b | PD |
| Osborn | Os | GIO.GL 3.21/ | lacustrine | cl, sicl | C,D | ID |
| Portage | Po P+ | Dg.EB 5.22 | outwash | gsil, gsl | d, e | WD-RD |
| Rockland | RO | (4" or less of soil/consolidated rock) | | | | |
| RoughBroken | RB | (steep eroded soil complex) | | | | |
| Shearerdale | Sh | LiO. EB 5.21/9 | till | l, cl | f, g | WD |
| Snipe | Sn | LH.EG 7.32 | lacustrine | cl | B-C | PD |
| Taylor | Ty | R.BI 1.32 | alluvium | c, sic | B-C | WD |
| Twidwell | Tw | Dg.EB 5.22 | outwash | gsil, gsl | d, e | WD-RD |

legend from (1)
published 1:125,000 Soil map

# DESCRIPTIVE LEGEND

| MAP UNIT[1] | MATERIALS[2] | SOIL COMPONENTS[3] Major | Minor | SIGNIFICANT CHARACTERISTICS OF THE SOILS[4] |
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| FOOTHILLS AREAS DOMINATED BY SHALLOW AND MODERATELY DEEP, COARSE TEXTURED SOILS AND ROCKLAND ON MODERATE TO VERY STEEP SLOPES | | | | |
| 1a Chowade-Rockland | Shallow glacial drift and colluvium overlying quartzite, sandstone and shale on steeply sloping to extremely steep mountain ridges and upper slopes<br>Elevations greater than 1370 m (4500 ft) | Chowade<br>Lithic Orthic Dystric Brunisol | Orthic Dystric Brunisols | About 50% of the soils are shallow, well drained, and rapidly permeable; they have gravelly sandy loam horizons overlying bedrock at 9 to 50 cm (4-20 in.); about 30% of the mapping unit is Rock Outcrop. Moderately deep, sandy loam soils occupy 20% or less of the unit. Most of the soils occur on shedding sites. |
| 1b Horseshoe-Gething | Moderately deep glacial drift and colluvium overlying sandstone and shale on moderately sloping to extremely steep mountain slopes<br>Elevation range: 1130-1370 m (3700-4500 ft) | Horseshoe<br>Degraded Dystric Brunisol<br>Gething<br>Cumulic Regosol | Lithic Orthic Degraded Dystric Brunisols<br>Gleysols | About 60% of the soils are moderately deep, well drained, and rapidly permeable; they have gravelly sandy loam surface and subsoil horizons. Shallow soils, 9 to 50 cm (4-20 in.) thick over bedrock, and dark colored, poorly drained soils occupy 20 to 40% of the mapping unit. Most of the soils occur on shedding sites. |
| 1c Horseshoe-Gething-Fellers | Moderately deep colluvium and glacial till overlying sandstone and shale on moderately sloping to steep mountain and plateau slopes<br>Elevation range: 1220-1370 m (4000-4500 ft) | Horseshoe<br>Degraded Dystric Brunisol<br>Gething<br>Cumulic Regosol<br>Fellers<br>Brunisolic Gray Luvisol | Gleysols | About 70% of the soils occur on shedding sites and are moderately deep, well drained, and rapidly permeable; they have gravelly sandy loam surface and subsoil horizons. About 30% of the mapping unit consists of moderately well to poorly drained soils on receiving sites. |
| PLATEAU AREAS DOMINATED BY DEEP TO SHALLOW, FINE TEXTURED SOILS ON NEARLY LEVEL TO STEEP SLOPES | | | | |
| 2a Alcan-Murdale | Moderately deep to deep, weakly calcareous glacial till overlying sandstone and shale on moderately to steeply sloping, unpatterned uplands<br>Elevations less than 840 m (2750 ft) | Alcan<br>Orthic Gray Luvisol<br>Murdale<br>Gray Solo | | About 70% of the soils are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils that contain carbonates and gypsum. About 30% of the soils are well drained and permeable; they have dark colored, loam surface horizons and clay and clay loam subsoils. Most of the soils occupy shedding sites. |
| 2b Alcan-Osborn | Deep, weakly calcareous glacial till and lacustrine deposits overlying sandstone and shale on moderately to steeply sloping, unpatterned uplands<br>Elevation range: 760-915 m (2500-3000 ft) | Alcan<br>Orthic Gray Luvisol<br>Osborn<br>Gleyed Orthic Gray Luvisol | | About 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils developed from till deposits. About 30% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. |
| 2c Alcan-Shearerdale | Moderately deep to shallow, weakly calcareous glacial till overlying sandstone on steep to extremely steep escarpments and upper slopes<br>Elevations less than 915 m (3000 ft) | Alcan<br>Orthic Gray Luvisol<br>Shearerdale<br>Lithic Degraded Eutric Brunisol | Regosols | About 70% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils. About 30% of the soils are shallow, well drained, and moderately permeable; they have clay loam subsoils that overlie bedrock at 9-50 cm (4-20 in.). Most of the soils occur on shedding sites. |
| 2d Fellers | Moderately deep, acid to neutral glacial till overlying shale and sandstone on moderately to steeply sloping unpatterned uplands<br>Elevation range: 915-1220 m (3000-4000 ft) | Fellers<br>Brunisolic Gray Luvisol | Lithic Brunisolic Gleyed Orthic Gray Luvisol | About 80% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 20% of the soils are shallow, overlying bedrock at 9-50 cm (4-20 in.), and imperfectly drained clay loams. Most of the soils occur on shedding sites. |
| 2e Fellers-Osborn | Deep, acid to neutral glacial till and lacustrine deposits overlying shale and sandstone on nearly level to moderately sloping, unpatterned uplands<br>Elevation range: 840-1100 m (2750-3600 ft) | Fellers<br>Brunisolic Gray Luvisol<br>Osborn<br>Gleyed Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons developed from till materials. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. |
| 2f Fellers-Wonowon | Deep, acid to neutral glacial till overlying shale and sandstone on nearly level to moderately sloping unpatterned uplands<br>Elevation range: 915-1220 m (3000-4000 ft) | Fellers<br>Brunisolic Gray Luvisol<br>Wonowon<br>Gleyed Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface layers overlie clay loam and clay subsoils. |
| 2g Jedney-Alcan-Rockland | Shallow to moderately deep, acid to neutral glacial till overlying sandstone and shale on moderately sloping to extremely steep uplands and escarpments<br>Elevations less than 1220 m (4000 ft) | Jedney<br>Lithic Orthic Gray Luvisol<br>Alcan<br>Orthic Gray Luvisol | | About 40% of the soils are shallow, moderately well drained, and slowly permeable, they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 30% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam horizons over clay subsoils. About 30% of the mapping unit consists of Rock Outcrop. Most |
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| | (3700-4500 ft) | | | and dark colored, poorly drained soils occupy 20 to 40% of the mapping unit. Most of the soils occur on shedding sites. |
| 1c Horseshoe-Gething-Fellers | Moderately deep colluvium and glacial till overlying sandstone and shale on moderately sloping to steep mountain and plateau slopes<br>Elevation range: 1220-1370 m (4000-4500 ft) | Horseshoe<br>Degraded Dystric Brunisol<br>Gething<br>Cumulic Regosol<br>Fellers<br>Brunisolic Gray Luvisol | Gleysols | About 70% of the soils occur on shedding sites and are moderately deep, well drained, and rapidly permeable; they have gravelly sandy loam surface and subsoil horizons. About 30% of the mapping unit consists of moderately well to poorly drained soils on receiving sites. |

PLATEAU AREAS DOMINATED BY DEEP TO SHALLOW, FINE TEXTURED SOILS ON NEARLY LEVEL TO STEEP SLOPES

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| 2a Alcan-Murdale | Moderately deep to deep, weakly calcareous glacial till overlying sandstone and shale on moderately to steeply sloping, unpatterned uplands<br>Elevations less than 840 m (2750 ft) | Alcan<br>Orthic Gray Luvisol<br>Murdale<br>Gray Solo[illegible] | | About 70% of the soils are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils that contain carbonates and gypsum. About 30% of the soils are well drained and permeable; they have dark colored, loam surface horizons and clay and clay loam subsoils. Most of the soils occupy shedding sites. |
| 2b Alcan-Osborn | Deep, weakly calcareous glacial till and lacustrine deposits overlying sandstone and shale on moderately to steeply sloping, unpatterned uplands<br>Elevation range: 760-915 m (2500-3000 ft) | Alcan<br>Orthic Gray Luvisol<br>Osborn<br>Gleyed Orthic Gray Luvisol | | About 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils developed from till deposits. About 30% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. |
| 2c Alcan-Shearerdale | Moderately deep to shallow, weakly calcareous glacial till overlying sandstone on steep to extremely steep escarpments and upper slopes<br>Elevations less than 915 m (3000 ft) | Alcan<br>Orthic Gray Luvisol<br>Shearerdale<br>Lithic Degraded Eutric Brunisol | Regosols | About 70% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils. About 30% of the soils are shallow, well drained, and moderately permeable; they have clay loam subsoils that overlie bedrock at 9-50 cm (4-20 in.). Most of the soils occur on shedding sites. |
| 2d Fellers | Moderately deep, acid to neutral glacial till overlying shale and sandstone on moderately to steeply sloping unpatterned uplands<br>Elevation range: 915-1220 m (3000-4000 ft) | Fellers<br>Brunisolic Gray Luvisol | Lithic Brunisolic<br>Gleyed Orthic Gray Luvisol | About 80% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 20% of the soils are shallow, overlying bedrock at 9-50 cm (4-20 in.), and imperfectly drained clay loams. Most of the soils occur on shedding sites. |
| 2e Fellers-Osborn | Deep, acid to neutral glacial till and lacustrine deposits overlying shale and sandstone on nearly level to moderately sloping, unpatterned uplands<br>Elevation range: 840-1100 m (2750-3600 ft) | Fellers<br>Brunisolic Gray Luvisol<br>Osborn<br>Gleyed Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons developed from till materials. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. |
| 2f Fellers-Wonowon | Deep, acid to neutral glacial till overlying shale and sandstone on nearly level to moderately sloping unpatterned uplands<br>Elevation range: 915-1220 m (3000-4000 ft) | Fellers<br>Brunisolic Gray Luvisol<br>Wonowon<br>Gleyed Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface layers overlie clay loam and clay subsoils. |
| 2g Jedney-Alcan-Rockland | Shallow to moderately deep, acid to neutral glacial till overlying sandstone and shale on moderately sloping to extremely steep uplands and escarpments<br>Elevations less than 1220 m (4000 ft) | Jedney<br>Lithic Orthic Gray Luvisol<br>Alcan<br>Orthic Gray Luvisol | | About 40% of the soils are shallow, moderately well drained, and slowly permeable, they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 30% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam horizons over clay subsoils. About 30% of the mapping unit consists of Rock Outcrop. Most of the soils occur on shedding sites. |
| 2h Jedney-Wonowon | Shallow to moderately deep, acid glacial till overlying sandstone and shale on nearly level to moderately sloping, unpatterned uplands<br>Elevations range: 970-1220 m (3200-4000 ft) | Jedney<br>Lithic Orthic Gray Luvisol<br>Wonowon<br>Gleyed Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy shedding sites and are shallow, moderately well drained, and slowly permeable; they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. |
| 2i Wonowon-Jedney | Moderately deep to shallow, acid to neutral glacial till overlying sandstone and shale on nearly level to moderately sloping, unpatterned uplands<br>Elevations range: 760 1020 m (2500-3350 ft) | Wonowon<br>Gleyed Orthic Gray Luvisol<br>Jedney<br>Lithic Orthic Gray Luvisol | Gleysols | About 80% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. About 20% of the soils occupy shedding sites and are shallow, moderately well drained, and slowly permeable; they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). |
| 2j Wonowon-Osborn-Jedney | Moderately deep to shallow, acid to neutral glacial till overlying sandstone and shale on moderately to steeply sloping, unpatterned uplands<br>Elevation range: 760-1220 m (2500 4000 ft) | Wonowon<br>Gleyed Orthic Gray Luvisol<br>Osborn<br>Gleyed Orthic Gray Luvisol<br>Jedney<br>Lithic Orthic Gray Luvisol | Gleysols | About 50% of the soils are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. About 30% of the soils have clay loam surface horizons overlying slightly calcareous lacustrine clay deposits. About 20% of the soils occupy shedding sites, are shallow, and have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). |

PLATEAU AREAS DOMINATED BY DEEP, FINE TEXTURED SOILS ON GENTLE TO MODERATE SLOPES

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| 3a Donnelly-Snipe | Deep, weakly calcareous mixed till and lacustrine deposits on nearly level to moderately sloping lower plateau areas<br>Elevation range: 685-900 m (2250-2950 ft) | Donnelly<br>Solodic Gray Luvisol<br>Snipe<br>Low Humic Eluviated Gleysol | | About 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam and loam surface horizons and compact clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. |
| 3b Donnelly, eroded phase | Deep, weakly calcareous mixed till and lacustrine deposits of lower dissected plateau slopes<br>Elevations less than 760 m (2500 ft) | Donnelly<br>Solodic Gray Luvisol | Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected[illegible] |

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| | | till and lacustrine deposits on nearly level to moderately sloping lower plateau areas<br>Elevation range: 685-900 m (2250-2950 ft) | Solodic Gray Luvisol<br>Snipe Low Humic Eluviated Gleysol | | about 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam and loam surface horizons and compact clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. |
| 3b | Donnelly, eroded phase | Deep, weakly calcareous mixed till and lacustrine deposits of lower dissected plateau slopes<br>Elevations less than 760 m (2500 ft) | Donnelly Solodic Gray Luvisol | Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. |
| 3c | Goose-Judah | Deep, moderately calcareous variable textured lacustrine deposits on irregular hummocky topography<br>Elevations less than 760 m (2500 ft) | Goose Orthic Humic Gleysol<br>Judah Dark Gray Luvisol | Gleyed Orthic Gray Luvisols | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the mapping unit consists of deep, well drained, moderately permeable soils on hummocky shedding sites. They have silt loam surface horizons over silty clay subsoils. |
| 3d | Goose-Osborn | Deep, moderately calcareous lacustrine deposits on nearly level, unpatterned slopes<br>Elevation range: 685-840 m (2250-2750 ft) | Goose Orthic Humic Gleysol<br>Osborn Gleyed Orthic Gray Luvisol | | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the soils occupy receiving sites and are imperfectly drained, slowly permeable clay loams and clays. |
| 3e | Nig-Kenzie-Osborn | Deep, neutral to acid lacustrine deposits on level and depressional lower plateau areas<br>Elevation range: 840-990 m (2750-3250 ft) | Nig Humic Eluviated Gleysol<br>Kenzie Terric Mesisol, Terric Fibrisol<br>Osborn Gleyed Orthic Gray Luvisol | Eutric Brunisols | About 50% of the soils are deep, poorly drained and slowly permeable; they have dark colored silty clay loam surface horizons and massive compact clay subsoils. About 30% of the soils consist of very poorly drained organic materials, and about 20% are imperfectly drained clay loams. These soils occupy level and ponded sites. Well drained sandy soils occupy scattered hummocky shedding sites. |
| 3f | Osborn-Alcan | Deep, weakly calcareous mixed till and lacustrine deposits on moderately sloping lower plateau areas<br>Elevation range: 840-990 m (2750-3250 ft) | Osborn Gleyed Orthic Gray Luvisol<br>Alcan Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over slightly calcareous lacustrine clay. About 30% of the soils occupy shedding sites and are moderately well drained clay loams developed from glacial till. Poorly drained, slowly permeable clays occupy 10-20% of the mapping unit on ponded sites. |
| 3g | Osborn-Nig | Deep, moderately calcareous lacustrine deposits on nearly level, unpatterned slopes<br>Elevation range: 760-990 m (2750-3250 ft) | Osborn Gleyed Orthic Gray Luvisol<br>Nig Humic Eluviated Gleysol | Orthic Gray Luvisols | About 70% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. |
| 3h | Osborn, eroded phase | Deep, weakly calcareous mixed till and lacustrine deposits on lower dissected plateau slopes<br>Elevation range: 760-990 m (2500-3250 ft) | Osborn Gleyed Orthic Gray Luvisol | Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. |
| VALLEYS DOMINATED BY DEEP, COARSE AND MEDIUM TEXTURED SOILS ON GENTLE TO MODERATE SLOPES | | | | | |
| 4a | Bullmoose - Portage Creek | Neutral to weakly calcareous, coarse textured alluvial and outwash materials overlying gravels on nearly level low terraces<br>Elevation range: 730-1220 m (2400-4000 ft) | Bullmoose Cumulic Regosol<br>Portage Creek Degraded Eutric Brunisol | Orthic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. |
| 4b | Lynx | Moderately calcareous, medium textured alluvial materials, often reworked by wind; on irregular sloping terraces<br>Elevations less than 760 m (2500 ft) | Lynx Brunisolic Gray Luvisol | Eutric Brunisols | About 80% of the soils are well drained and rapidly permeable; they have silty surface horizons and calcareous silt loam subsoils. About 20% of the mapping unit consists of well drained sandy soils that have lime close to the surface. The soils occupy shedding sites. |
| 4c | Lynx, eroded phase | Moderately calcareous, medium textured alluvial materials on irregular dissected terraces<br>Elevations less than 760 m (2500 ft) | Lynx Brunisolic Gray Luvisol | Regosols | Dominantly well drained, moderately permeable, silty textured soils on shedding sites. Variable amounts of eroded soils occur on irregular dissected terrace slopes. |
| 4d | Oetca-Twidwell | Neutral to weakly calcareous, coarse textured alluvial and outwash materials overlying gravels on nearly level, low terraces<br>Elevation range: 685-730 m (2250-2400 ft) | Oetca Orthic Regosols<br>Twidwell Degraded Eutric Brunisol | Cumulic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. |
| 4e | Portage Creek - Bullmoose | Neutral to weakly calcareous, coarse textured outwash and alluvial materials overlying gravels on undulating terraces<br>Elevation range: 730-1100 m (2400-3600 ft) | Portage Creek Degraded Eutric Brunisol<br>Bullmoose Cumulic Regosol | Orthic Regosols | Greater than 80% of the soils occupy shedding sites and are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occupy receiving and ponded sites and are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. |
| 4f | Taylor-Farrell | Weakly calcareous, medium to fine textured alluvial and colluvial materials on nearly level terraces and sloping fans<br>Elevations less than 685 m (2250 ft) | Taylor Rego Black<br>Farrell Orthic Regosol | Eutric Brunisols<br>Cumulic Regosols | About 60% of the soils are well drained and moderately to slowly permeable; they have clay loam and loam surface and subsoil horizons. About 40% of the soils are well drained, calcareous silt loams. The soils occupy shedding sites. |
| 4g | Twidwell-Oetca | Neutral to weakly calcareous, coarse textured outwash and alluvial materials overlying gravels on undulating terraces<br>Elevations less than 685 m (2250 ft) | Twidwell Degraded Eutric Brunisol<br>Oetca Orthic Regosol | Cumulic Regosols | Greater than 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. The soils occupy shedding sites. |

clay loams and clays.

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| 3e | Nig-Kenzie-Osborn | Deep, neutral to acid lacustrine deposits on level and depressional lower plateau areas<br>Elevation range: 840-990 m (2750-3250 ft) | Nig<br>Humic Eluviated Gleysol<br>Kenzie<br>Terric Mesisol, Terric Fibrisol<br>Osborn<br>Gleyed Orthic Gray Luvisol | Eutric Brunisols<br>(4) | About 50% of the soils are deep, poorly drained and slowly permeable; they have dark colored silty clay loam surface horizons and massive compact clay subsoils. About 30% of the soils consist of very poorly drained organic materials, and about 20% are imperfectly drained clay loams. These soils occupy level and ponded sites. Well drained sandy soils occupy scattered hummocky shedding sites. |
| 3f | Osborn-Alcan | Deep, weakly calcareous mixed till and lacustrine deposits on moderately sloping lower plateau areas<br>Elevation range: 840-990 m (2750-3250 ft) | Osborn<br>Gleyed Orthic Gray Luvisol<br>Alcan<br>Orthic Gray Luvisol | Gleysols | About 60% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over slightly calcareous lacustrine clay. About 30% of the soils occupy shedding sites and are moderately well drained clay loams developed from glacial till. Poorly drained, slowly permeable clays occupy 10-20% of the mapping unit on ponded sites. |
| 3g | Osborn-Nig | Deep, moderately calcareous lacustrine deposits on nearly level, unpatterned slopes<br>Elevation range: 760-990 m (2750-3250 ft) | Osborn<br>Gleyed Orthic Gray Luvisol<br>Nig<br>Humic Eluviated Gleysol | Orthic Gray Luvisols | About 70% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. |
| 3h | Osborn, eroded phase | Deep, weakly calcareous mixed till and lacustrine deposits on lower dissected plateau slopes<br>Elevation range: 760-990 m (2500-3250 ft) | Osborn<br>Gleyed Orthic Gray Luvisol | Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. |

VALLEYS DOMINATED BY DEEP, COARSE AND MEDIUM TEXTURED SOILS ON GENTLE TO MODERATE SLOPES

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| 4a | Bullmoose - Portage Creek | Neutral to weakly calcareous, coarse textured alluvial and outwash materials overlying gravels on nearly level low terraces<br>Elevation range: 730-1220 m (2400-4000 ft) | Bullmoose<br>Cumulic Regosol<br>Portage Creek<br>Degraded Eutric Brunisol | Orthic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. |
| 4b | Lynx | Moderately calcareous, medium textured alluvial materials, often reworked by wind; on irregular sloping terraces<br>Elevations less than 760 m (2500 ft) | Lynx<br>Brunisolic Gray Luvisol | Eutric Brunisols | About 80% of the soils are well drained and rapidly permeable; they have silty surface horizons and calcareous silt loam subsoils. About 20% of the mapping unit consists of well drained sandy soils that have lime close to the surface. The soils occupy shedding sites. |
| 4c | Lynx, eroded phase | Moderately calcareous, medium textured alluvial materials on irregular dissected terraces<br>Elevations less than 760 m (2500 ft) | Lynx<br>Brunisolic Gray Luvisol | Regosols | Dominantly well drained, moderately permeable, silty textured soils on shedding sites. Variable amounts of eroded soils occur on irregular dissected terrace slopes. |
| 4d | Oetca-Twidwell | Neutral to weakly calcareous, coarse textured alluvial and outwash materials overlying gravels on nearly level, low terraces<br>Elevation range: 685-730 m (2250-2400 ft) | Oetca<br>Orthic Regosols<br>Twidwell<br>Degraded Eutric Brunisol | Cumulic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. |
| 4e | Portage Creek - Bullmoose | Neutral to weakly calcareous, coarse textured outwash and alluvial materials overlying gravels on undulating terraces<br>Elevation range: 730-1100 m (2400-3600 ft) | Portage Creek<br>Degraded Eutric Brunisol<br>Bullmoose<br>Cumulic Regosol | Orthic Regosols | Greater than 80% of the soils occupy shedding sites and are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occupy receiving and ponded sites and are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. |
| 4f | Taylor-Farrell | Weakly calcareous, medium to fine textured alluvial and colluvial materials on nearly level terraces and sloping fans<br>Elevations less than 685 m (2250 ft) | Taylor<br>Rego Black<br>Farrell<br>Orthic Regosol | Eutric Brunisols<br>Cumulic Regosols | About 60% of the soils are well drained and moderately to slowly permeable; they have clay loam and loam surface and subsoil horizons. About 40% of the soils are well drained, calcareous silt loams. The soils occupy shedding sites. |
| 4g | Twidwell-Oetca | Neutral to weakly calcareous, coarse textured outwash and alluvial materials overlying gravels on undulating terraces<br>Elevations less than 685 m (2250 ft) | Twidwell<br>Degraded Eutric Brunisol<br>Oetca<br>Orthic Regosol | Cumulic Regosols | Greater than 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. The soils occupy shedding sites. |

ORGANIC MAP UNITS

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| 5a | Kenzie-Cogol | Acid, shallow and deep organic deposits (containing 30% or more organic matter) overlying till and lacustrine deposits on nearly level and depressional topography<br>Elevation range: 975-1160 m (3200-3800 ft) | Kenzie<br>Terric Mesisol, Terric Fibrisol<br>Cogol<br>Typic Mesisol | Gleysols | About 60% of the soils are moderately deep, very poorly drained, and rapidly permeable; they have dark colored, semidecomposed organic surface and subsurface layers more than 40 cm (16 in.) thick over mineral soil. About 40% of the mapping unit consists of deep organic soils and poorly drained clay loam mineral soils. The soils occupy ponded sites. |

(5)

# DESCRIPTIVE LEGEND

| ONENTS[3] Minor | SIGNIFICANT CHARACTERISTICS OF THE SOILS[4] | VEGETATION[5] | CLIMATE[6] |
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| DERATE TO VERY STEEP SLOPES | | | |
| Orthic Dystric Brunisols | About 50% of the soils are shallow, well drained, and rapidly permeable; they have gravelly sandy loam horizons overlying bedrock at 9 to 50 cm (4-20 in.); about 30% of the mapping unit is Rock Outcrop. Moderately deep, sandy loam soils occupy 20% or less of the unit. Most of the soils occur on shedding sites. | Lodgepole pine, white and black spruce, alpine fir, blueberries, groundbirch, and herbs (Tundra and Upper Foothills Sections) | Subarctic Humid: very cold with short growing season of <120 days above 5°C (41°F). Degree-days 800-1200; frost-free days <30. Water deficits are very slight in the growing season. |
| Lithic Orthic Degraded Dystric Brunisols<br>Gleysols | About 60% of the soils are moderately deep, well drained, and rapidly permeable; they have gravelly sandy loam surface and subsoil horizons. Shallow soils, 9 to 50 cm (4-20 in.) thick over bedrock, and dark colored, poorly drained soils occupy 20 to 40% of the mapping unit. Most of the soils occur on shedding sites. | White and black spruce, lodgepole pine, blueberries, shrubs, and herbs (Northern Foothills Section) | Subarctic Humid: very cold with mean annual soil temperatures of -7°C to +2°C (20-36°F). Discontinuous permafrost may occur and wet soils may remain partly frozen. Degree-days <600; frost-free days <30. Water deficits are very slight in the growing season. |
| Gleysols | About 70% of the soils occur on shedding sites and are moderately deep, well drained, and rapidly permeable; they have gravelly sandy loam surface and subsoil horizons. About 30% of the mapping unit consists of moderately well to poorly drained soils on receiving sites. | White and black spruce, lodgepole pine, blueberries, shrubs, and herbs (Northern Foothills Section) | Subarctic Humid: very cold with short growing season of <120 days above 5°C (41°F). Degree-days 800-1650; frost-free days <30-60. Water deficits are slight in the growing season. |
| | About 70% of the soils are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils that contain carbonates and gypsum. About 30% of the soils are well drained and permeable; they have dark colored, loam surface horizons and clay and clay loam subsoils. Most of the soils occupy shedding sites. | Aspen, lodgepole pine, white spruce, shrubs, herbs, and grasses (Lower Foothills Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| | About 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils developed from till deposits. About 30% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. | Aspen, balsam poplar, lodgepole pine, and shrubs; willows, black spruce, herbs and grasses in more poorly drained sites (Lower Foothills Section) | Cryboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Regosols | About 70% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam surface horizons overlying clay subsoils. About 30% of the soils are shallow, well drained, and moderately permeable; they have clay loam subsoils that overlie bedrock at 9-50 cm (4-20 in.). Most of the soils occur on shedding sites. | Aspen, lodgepole pine, white spruce, buffaloberry (Lower Foothills Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Lithic Brunisolic Gleyed Orthic Gray Luvisol | About 80% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 20% of the soils are shallow, overlying bedrock at 9-50 cm (4-20 in.), and imperfectly drained clay loams. Most of the soils occur on shedding sites. | Lodgepole pine, white spruce, black spruce, and blueberries (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<200-120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60-<30. Water deficits are significant to slight in the growing season. |
| Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons developed from till materials. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons overlying slightly calcareous clay subsoils developed from lacustrine deposits. | Lodgepole pine, white and black spruce, blueberries, and herbs (Northern Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface layers overlie clay loam and clay subsoils. | Lodgepole pine, black and white spruce, blueberries, and herbs (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<200-120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60-<30. Water deficits are significant to slight in the growing season. |
| | About 40% of the soils are shallow, moderately well drained, and slowly permeable, they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 30% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam horizons over clay subsoils. About 30% of the mapping unit consists of Rock Outcrop. Most of the soils occur on shedding sites. | Lodgepole pine, black and white spruce, blueberries, and mosses (Northern Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils occupy shedding sites and are shallow, moderately well drained, and slowly permeable; they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 40% of the soils occupy receiving sites and are mod- | Black spruce, lodgepole pine, blueberries, mosses, and sedges (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<200-120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60-<30. Water deficits are significant to slight in the growing |

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| | overlying slightly calcareous clay subsoils developed from lacustrine deposits. | | |
| Gleysols | About 60% of the soils occupy shedding sites and are moderately deep, moderately well drained, and slowly permeable; they have clay loam and clay horizons. About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface layers overlie clay loam and clay subsoils. | Lodgepole pine, black and white spruce, blueberries, and herbs (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<200-120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60-<30. Water deficits are significant to slight in the growing season. |
| | About 40% of the soils are shallow, moderately well drained, and slowly permeable, they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 30% of the soils are moderately deep, moderately well drained, and slowly permeable; they have clay loam horizons over clay subsoils. About 30% of the mapping unit consists of Rock Outcrop. Most of the soils occur on shedding sites. | Lodgepole pine, black and white spruce, blueberries, and mosses (Northern Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils occupy shedding sites and are shallow, moderately well drained, and slowly permeable; they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). About 40% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. | Black spruce, lodgepole pine, blueberries, mosses, and sedges (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<200-120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60-<30. Water deficits are significant to slight in the growing season. |
| Gleysols | About 80% of the soils occupy receiving sites and are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. About 20% of the soils occupy shedding sites and are shallow, moderately well drained, and slowly permeable; they have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). | Black spruce, lodgepole pine, blueberries, mosses, and sedges (Northern Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Water deficits are significant in the growing season. |
| Gleysols | About 50% of the soils are moderately deep, imperfectly drained, and slowly permeable; the surface horizons overlie clay loam and clay subsoils. About 30% of the soils have clay loam surface horizons overlying slightly calcareous lacustrine clay deposits. About 20% of the soils occupy shedding sites, are shallow, and have clay loam horizons overlying bedrock at 9-50 cm (4-20 in.). | Black spruce, lodgepole pine, blueberries, mosses, and sedges (Northern Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| | About 70% of the soils occupy shedding sites and are deep, moderately well drained, and slowly permeable; they have clay loam and loam surface horizons and compact clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. | Aspen, lodgepole pine; with willow, sedges, and black spruce in poorly drained sites (Lower Foothills Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. | Aspen, lodgepole pine, shrubs, grasses, and herbs (Lower Foothills Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Gleyed Orthic Gray Luvisols | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the mapping unit consists of deep, well drained, moderately permeable soils on hummocky shedding sites. They have silt loam surface horizons over silty clay subsoils. | Willow, groundbirch, aspen, black spruce; aspen and lodgepole pine on well drained knolls (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the soils occupy receiving sites and are imperfectly drained, slowly permeable clay loams and clays. | Willow, groundbirch, aspen, black spruce, and sedges (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Eutric Brunisols | About 50% of the soils are deep, poorly drained and slowly permeable; they have dark colored silty clay loam surface horizons and massive compact clay subsoils. About 30% of the soils consist of very poorly drained organic materials, and about 20% are imperfectly drained clay loams. These soils occupy level and ponded sites. Well drained sandy soils occupy scattered hummocky shedding sites. | Willow, groundbirch, Labrador tea, black spruce, sedges, and mosses (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over slightly calcareous lacustrine clay. About 30% of the soils occupy shedding sites and are moderately well drained clay loams developed from glacial till. Poorly drained, slowly permeable clays occupy 10-20% of the mapping unit on ponded sites. | Aspen, lodgepole pine, white spruce, willows, and herbs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Orthic Gray Luvisols | About 70% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. | Aspen, white and black spruce, willows, and sedges (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. | Aspen, lodgepole pine, white spruce, and shrubs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Orthic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface | Balsam poplar, lodgepole pine, | Cryoboreal Subhumid: cold with moderately short |

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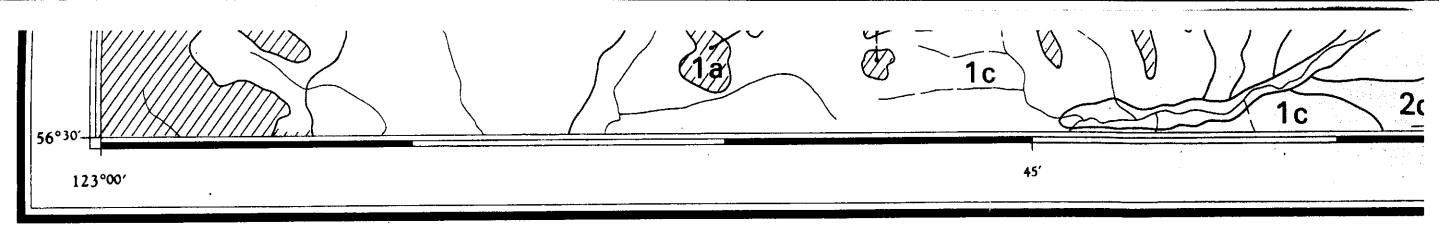
| Gleyed Orthic Gray Luvisols | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the mapping unit consists of deep, well drained, moderately permeable soils on hummocky shedding sites. They have silt loam surface horizons over silty clay subsoils. | Willow, groundbirch, aspen, black spruce; aspen and lodgepole pine on well drained knolls (Lower Foothills Section) | (7) Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| | About 60% of the soils occupy ponded sites and are deep, poorly drained, and slowly permeable; they have dark colored, silty clay loam surface horizons and massive compact clay subsoils. About 40% of the soils occupy receiving sites and are imperfectly drained, slowly permeable clay loams and clays. | Willow, groundbirch, aspen, black spruce, and sedges (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Eutric Brunisols | About 50% of the soils are deep, poorly drained and slowly permeable; they have dark colored silty clay loam surface horizons and massive compact clay subsoils. About 30% of the soils consist of very poorly drained organic materials, and about 20% are imperfectly drained clay loams. These soils occupy level and ponded sites. Well drained sandy soils occupy scattered hummocky shedding sites. | Willow, groundbirch, Labrador tea, black spruce, sedges, and mosses (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over slightly calcareous lacustrine clay. About 30% of the soils occupy shedding sites and are moderately well drained clay loams developed from glacial till. Poorly drained, slowly permeable clays occupy 10-20% of the mapping unit on ponded sites. | Aspen, lodgepole pine, white spruce, willows, and herbs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Orthic Gray Luvisols | About 70% of the soils occupy receiving sites and are deep, imperfectly drained, and slowly permeable; they have clay loam surface horizons over clay subsoils. About 30% of the soils occupy ponded sites and are poorly drained, slowly permeable clays. | Aspen, white and black spruce, willows, and sedges (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Regosols | Dominantly moderately well drained, slowly permeable soils on shedding sites; they have clay loam surface horizons and compact clay subsoils. Variable amounts of eroded soils occur on irregular dissected topography along terrace edges. | Aspen, lodgepole pine, white spruce, and shrubs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Orthic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. | Balsam poplar, lodgepole pine, white spruce, willows, shrubs, and herbs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Eutric Brunisols | About 80% of the soils are well drained and rapidly permeable; they have silty surface horizons and calcareous silt loam subsoils. About 20% of the mapping unit consists of well drained sandy soils that have lime close to the surface. The soils occupy shedding sites. | Aspen, balsam poplar, lodgepole pine, buffaloberry, shrubs, and herbs (Mixedwood Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficts are significant in the growing season. |
| Regosols | Dominantly well drained, moderately permeable, silty textured soils on shedding sites. Variable amounts of eroded soils occur on irregular dissected terrace slopes. | Aspen, balsam poplar, lodgepole pine, buffaloberry, shrubs, and herbs (Mixedwood Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Cumulic Regosols | About 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occur on gravelly river bars. Much of this mapping unit has a high seasonal water table and is subject to flooding. The soils occupy shedding sites. | Balsam poplar, white spruce, lodgepole pine, willows, shrubs, and herbs (Mixedwood Section) | Cryoboreal Subhumid: moderately cold with moderately snort to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Orthic Regosols | Greater than 80% of the soils occupy shedding sites and are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils occupy receiving and ponded sites and are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. | Balsam poplar, lodgepole pine, white spruce, willows, shrubs, and herbs (Lower Foothills Section) | Cryoboreal Subhumid: cold with moderately short growing season [120-<220 days above 5°C (41°F)]. Degree-days 1200-1650; frost-free days 30-60. Water deficits are significant in the growing season. |
| Eutric Brunisols Cumulic Regosols | About 60% of the soils are well drained and moderately to slowly permeable; they have clay loam and loam surface and subsoil horizons. About 40% of the soils are well drained, calcareous silt loams. The soils occupy shedding sites. | Grasslands and open forest of aspen, lodgepole pine, and balsam poplar (Mixedwood Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Cumulic Regosols | Greater than 80% of the soils are well drained and rapidly permeable; they have sandy loam surface horizons and gravelly subsoils. About 20% of the soils are imperfectly and poorly drained. Parts of the mapping unit may be flooded in periods of high water. The soils occupy shedding sites. | Balsam poplar, white spruce, lodgepole pine, willows, shrubs, and herbs (Mixedwood Section) | Cryoboreal Subhumid: moderately cold with moderately short to moderately long growing season [<220 days above 5°C (41°F)]. Degree-days 1650-1900; frost-free days 60-75. Water deficits are significant in the growing season. |
| Gleysols | About 60% of the soils are moderately deep, very poorly drained, and rapidly permeable; they have dark colored, semidecomposed organic surface and subsurface layers more than 40 cm (16 in.) thick over mineral soil. About 40% of the mapping unit consists of deep organic soils and poorly drained clay loam mineral soils. The soils occupy ponded sites. | Labrador tea, black spruce, sedges, and mosses (Northern Foothills Section) | Cryoboreal Subhumid and Subarctic Humid: cold and very cold with moderately short to short growing season [<220-<120 days above 5°C (41°F)]. Degree-days 1650-800; frost-free days 60- 30. Water deficits are significant to slight in the growing season. |

Map units dominated by Organic soils are few and scattered in the map area. One unit Kenzie-Cogal (5a), composed of shallow and deep semidecomposed organic matter and poorly drained Gleysols, was recognized.




# SOIL MAP LEGEND

VERY COLD FOOTHILLS AREAS DOMINATED BY SHALLOW, COARSE TEXTURED SOILS AND ROCKLAND ON MODERATE TO EXTREMELY STEEP SLOPES

1a Chowade-Rockland

1b Horseshoe-Gething

1c Horseshoe-Gething-Fellers

COLD AND VERY COLD PLATEAU AREAS DOMINATED BY DEEP TO SHALLOW, FINE TEXTURED SOILS ON NEARLY LEVEL TO STEEP SLOPES

2a Alcan-Murdale

2b Alcan-Osborn

2c Alcan-Shearerdale

2d Fellers

2e Fellers-Osborn

2f Fellers-Wonowon

2g Jedney-Alcan-Rockland

2h Jedney-Wonowon

2i Wonowon-Jedney

2j Wonowon-Osborn-Jedney

COLD TO MODERATELY COLD PLATEAU AREAS DOMINATED BY DEEP, FINE TEXTURED SOILS ON NEARLY LEVEL TO MODERATE SLOPES

3a Donnelly-Snipe

3b Donnelly, eroded phase

3c Goose-Judah

3d Goose-Osborn

3e Nig-Kenzie-Osborn

3f Osborn-Alcan

3g Osborn-Nig

3h Osborn, eroded phase

MODERATELY COLD VALLEYS DOMINATED BY COARSE AND MEDIUM TEXTURED SOILS ON NEARLY LEVEL TO MODERATE SLOPES

4a Bullmoose - Portage Creek

4b Lynx

4c Lynx, eroded phase

4d Oetca-Twidwell

4e Portage Creek - Bullmoose

4f Taylor-Farrell

4g Twidwell-Oetca

ORGANIC SOILS

5a Kenzie-Cogol

## 1. MAP UNITS

Map units are combinations of two or more different kinds of soil which occur together with some regularity of pattern.

For example, Map unit 3a consists of about 70% of well drained Donnelly soils and 30% of poorly drained Snipe soils; these soils occur regularly in combination on lower slopes of the plateau

## 2. LANDFORM AND GEOLOGIC MATERIALS

### Depth Classes

Shallow: more than 18 cm (7 in.) but less than 50 cm (20 in.) to hard rock
Moderately deep: 50 to 100 cm (20-40 in.) thick
Deep: more than 100 cm (40 in.) thick

### Reaction Classes

Acid: pH lower than 5.0
Acid to neutral: pH 5.0 to 7.5
Alkaline: pH higher than 7.5

Weakly calcareous: 1 to 6% $CaCO_3$ equivalent
Moderately to strongly calcareous: 6 to 40% $CaCO_3$ equivalent

### Topography

Very steep to extremely steep slopes 30 to over 60%

### Landforms

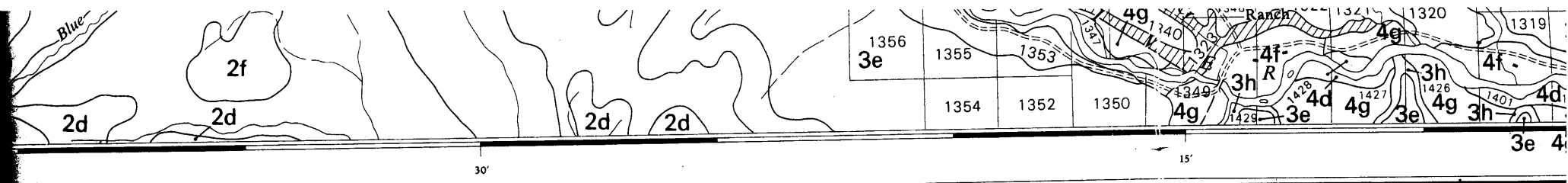
Alluvial fan: fan-shaped deposit of alluvium laid down by a stream where it emerges from an upland into less steeply sloping terrain.

Plain: area of level or nearly level land.

Plateau: a high plain usually cut by deep valleys.

Terrace: a nearly level, usually narrow plain bordering a river or lake; a number of river terraces may occur at different levels.

Bottom (1) of map




Soils info
B.C. Base

### Geologic Materials

Alluvium: materials such as clay, silt, sand, and gravel deposited by modern rivers and streams.

Colluvium: a heterogeneous mixture of materials that as a result of gravitational action has moved down a slope and settled at its base.

Glacial drift: all rock material carried by glacial ice and glacial meltwater, or rafted by icebergs; includes till, stratified drift, and scattered rock fragments.

Glacial till: unsorted and unstratified materials deposited by glacial ice.

Lacustrine deposit: material deposited in lake water and later exposed either by lowering of the water level or by uplifting of the land; the range in texture is from sands to clays.

Outwash: sediments washed out by flowing water beyond the glacier and laid down as stratified drift in thin foreset beds; the particle size may vary from boulders to silt.

### Texture

Texture (e.g. fine textured): see Textural triangle for Texture Groups under section 4.

## 3. SOIL COMPONENTS

The System of Soil Classification for Canada (1970)

Major soil components: Soils comprising 40% or more of the map unit

Minor soil components: Soils occupying not more than 40% or not less than 20% of the unit; soils occupying less than 20% are not designated unless they are a significant component of the map unit.

## 4. SIGNIFICANT CHARACTERISTICS OF THE SOILS

### Soil Drainage

The soil drainage classes are defined in terms of (i) actual moisture content in excess of field moisture capacity, and (ii) the extent of the period during which such excess water is present in the plant-root zone.

It is recognized that permeability, level of groundwater, and seepage are factors affecting moisture status. However, because these are not easily observed or measured in the field, they cannot be used generally as criteria of moisture status.

1) Rapidly drained - The soil moisture content seldom exceeds field capacity in any horizon except immediately after water additions.

2) Well drained - The soil moisture content does not normally exceed field capacity in any horizon (except possibly the C) for a significant part of the year.

3) Moderately well drained - The soil moisture in excess of field capacity remains for a small but significant period of the year.

4) Imperfectly drained - The soil moisture in excess of field capacity remains in subsurface horizons for moderately long periods during the year.

5) Poorly drained - The soil moisture in excess of field capacity remains in all horizons for a large part of the year.

6) Very poorly drained - Free water remains at or within 30 cm (12 in.) of the surface most of the year.

### Permeability

| | cm/hr* |
|---|---|
| Slowly permeable: | 0.13 - 0.50 |
| Moderately permeable: | 0.50 - 13.00 |
| Rapidly permeable: | 13.00 - 25.00 |

*rates through saturated undisturbed cores under a 1.27 cm head of water

### Drainage Site

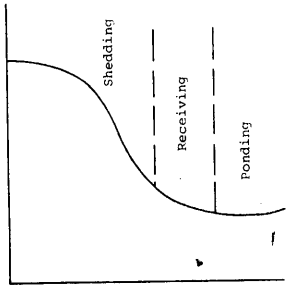
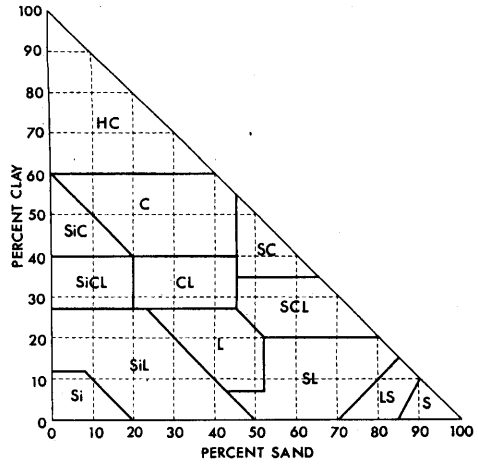



Diagram showing shedding, receiving and ponding sites.

## REFERENCE

Road, all weather
Road, dry weather
Cart track, trail
Intermittent stream
Horizontal control point
Bench mark ..... BM 3310
Surveyed lots ..... 2900

### Soil Textural Classes




Percentages of clay and sand in the main textural classes of soils.

The remainder of each class is silt

| Group | Name | Symbol |
|---|---|---|
| Coarse | sand | S |
| | loamy sand | LS |
| | sandy loam | SL |
| | fine sandy loam | FSL |
| Medium | loam | L |
| | silt loam | SiL |
| | silt | Si |
| | sandy clay loam | SCL |
| | clay loam | CL |
| | silty clay loam | SiCL |
| Fine | sandy clay | SC |
| | clay | C |
| | silty clay | SiC |
| | heavy clay | HC |

Bottom 2 of map.