

Table 3. Legend for the environmental variables.

Landforms

- 1 Glaciofluvial and other fluvial terraces
- 2 Floodplains
- 3 Talus slope
- 4 Colluvial basin
- 5 Drained lakes and flat lake margins
- 6 Lake or pond
- 7 Hills (including kames and moraines)
- 8 Disturbed

Surficial Geology

- 1 Glacial till
- 2 Glaciofluvial deposit
- 3 Active alluvium
- 4 Stabilized alluvium
- 5 Stream
- 6 Undifferentiated hill slope colluvium
- 7 Basin colluvium and organic deposits
- 8 Drained lake or lacustrine deposits
- 9 Lake or pond
- 10 Roads and gravel pads

Glacial Geology

- 1 Itkillik I till
- 2 Itkillik II till
- 3 Itkillik I outwash
- 4 Itkillik II outwash
- 5 Bedrock

Surficial Geomorphology

- 1 Frost scars
- 2 Wetland hummocks
- 3 Turf hummocks
- 4 Gelifluction features
- 5 Strangmoor or aligned hummocks
- 6 High centered polygons or flat centered polygons
- 7 Sorted and non-sorted stripes
- 8 Palsas
- 9 Thermokarst pits
- 10 Featureless or with < 20% frost scars
- 11 Well-developed hillslope water tracks and small streams > 50 cm deep
- 12 Poorly developed hillslope water tracks, < 50 cm deep
- 13 Gently rolling or irregular microrelief
- 14 Stoney surface
- 15 Lakes and ponds
- 16 Disturbed
- 17 Blockfield

Microsites

- 1 Frost-scar element
- 2 Inter-frost scar element
- 3 Strang or hummock
- 4 Flark or interstrang area
- 5 Polygon center
- 6 Polygon trough
- 7 Stripe element
- 8 Inter-stripe element
- 9 Animal den
- 10 Blockfield

Topographic Position

- 1 Hill crest or shoulder
- 2 Side slope
- 3 Footslope or toeslope
- 4 Flat
- 5 Drainage channel
- 6 Depression
- 7 Lake or pond

Estimated snow duration

- 1.0 Snow free all year
- 2.0 Snow free most of winter; some snow cover persists after storm but is blown free soon afterward
- 3.0 Snow free prior to melt out but with snow most of winter
- 4.0 Snow free immediately after melt out

- 5.0 Snow bank persists 1-2 weeks after melt out
- 6.0 Snow bank persists 3-4 weeks after melt out
- 7.0 Snow bank persists 4-8 weeks after melt out
- 8.0 Snow bank persists 8-12 weeks after melt out
- 9.0 Very short snow free period
- 10.0 Deep snow all year

Exposure Scale

- 1.0 Protected from winds
- 2.0 Moderate exposure to winds
- 3.0 Exposed to winds
- 4.0 Very exposed to winds

Site Moisture (modified from Komárková 1983)

- 1.0 Extremely xeric - almost no moisture; no plant growth
- 2.0 Very xeric - very little moisture; dry sand dunes
- 3.0 Xeric - little moisture; stabilized sand dunes, dry ridge tops
- 4.0 Subxeric - noticeable moisture; well-drained slopes, ridges
- 5.0 Subxeric to mesic - very noticeable moisture; flat to gently sloping
- 6.0 Mesic-moderate moisture; flat or shallow depressions
- 7.0 Mesic to subhygric - considerable moisture; depressions
- 8.0 Subhygric - very considerable moisture; saturated but with <5 % standing water <10 cm deep
- 9.0 Hygric - much moisture; up to 100% of surface under water 10 to 50 cm deep; lake margins, shallow ponds, streams
- 10.0 Hydric - very much moisture; 100% of surface under water 50 to 150 cm deep; lakes, streams

Animal and Human Disturbance

- 0.0 No sign present
- 1.0 Some sign present; no disturbance
- 2.0 Minor disturbance or extensive sign
- 3.0 Moderate disturbance; small dens or light grazing
- 4.0 Major disturbance; multiple dens or noticeable trampling
- 5.0 Very major disturbance; very extensive tunneling or large pit

Stability

- 1.0 Stable
- 2.0 Subject to occasional disturbance
- 3.0 Subject to prolonged but slow disturbance such as solifluction
- 4.0 Annually disturbed
- 5.0 Disturbed more than once annually

Soil Units

- 1 Pergelic Cryorthent, acid
- 2 Pergelic Cryohemist, euic
- 3 Pergelic Cryosaprist, euic
- 4 Lithic Pergelic Cryosaprist
- 5 Pergelic Cryofibrist, euic
- 6 Histic Pergelic Cryaquept, acid
- 7 Histic Pergelic Cryaquept, nonacid
- 8 Pergelic Cryaquept, acid
- 9 Pergelic Cryaquept, nonacid
- 10 Pergelic Cryochrept
- 11 Pergelic Cryumbrept
- 12 Ruptic-Lithic Cryumbrept
- 13 Pergelic Cryaquoll
- 14 Histic Pergelic Cryaquoll
- 15 Pergelic Cryoboroll

Soil Moisture (modified from Komárková 1983)

- 1.0 Very dry - very little moisture; soil does not stick together
- 2.0 Dry - little moisture; soil somewhat sticks together
- 3.0 Damp - noticeable moisture; soil sticks together but crumbles
- 4.0 Damp to moist - very noticeable moisture; soil clumps
- 5.0 Moist - moderate moisture; soil binds but can be broken apart
- 6.0 Moist to wet - considerable moisture; soil binds and sticks to fingers
- 7.0 Wet - very considerable moisture; drops of water can be squeezed out of soil
- 8.0 Very wet - much moisture can be squeezed out of soil
- 9.0 Saturated - very much moisture; water drips out of soil
- 10.0 Very saturated - extreme moisture; soil is more liquid than solid

Toolik Lake permanent vegetation plots:
site factors, soil physical and chemical properties,
plant species cover, photographs, and soil descriptions