

North Slope ARCSS/LAII Flux Study (1995-1996) (Walker 1995, unpublished)

Ground Survey: Environmental Variables Form (modified by A. Kade 2015 and L. Druckenmiller 2016)

Date _____ Releve # _____ Observer _____ Study area description _____
 Weather _____ GPS coordinates _____ Photo # _____ Soil pH _____

Landforms (CODE)

- 1 Hills (including kames and moraines)
- 2 Talus slope
- 3 Colluvial basin
- 4 Glaciofluvial and other fluvial terraces
- 5 Marine terrace
- 6 Floodplains
- 7 Drained lakes and flat lake margins
- 8 Abandoned point bars and sloughs
- 9 Estuary
- 10 Lake or pond
- 11 Stream
- 12 Sea bluff
- 13 Lake bluff
- 14 Stream bluff
- 15 Sand dunes
- 16 Beach
- 17 Disturbed
- 18 Pingo
- 19 Delta
- 20 Island
- 21 Morain
- 22 Kame
- 23 Residual surface (thaw lake plains)
- 24 Other:

Surficial Geology (Parent Material) (CODE)

- 1 Glacial tills
- 2 Glaciofluvial deposits
- 3 Active alluvial sands
- 4 Active alluvial gravels
- 5 Stabilized alluvium (sands & gravels)
- 6 Undifferentiated hill slope colluvium
- 7 Basin colluvium and organic deposits
- 8 Drained lake or lacustrine organic deposits
- 9 Lake or pond organic, sand, or silt
- 10 Undifferentiated sands
- 11 Undifferentiated clay
- 12 Roads and gravel pads
- 13 Bedrock
- 14 Eolian deposit
- 15 Marine deposit
- 16 Beach deposit
- 17 Other:

Site Moisture (modified from Komárková 1983) (SCALAR)

- 1 Extremely xeric - almost no moisture; no plant growth
- 2 Very xeric - very little moisture; dry sand dunes
- 3 Xeric - little moisture; stabilized sand dunes, dry ridge top
- 4 Subxeric - noticeable moisture; well-drained slopes, ridges
- 5 Subxeric to mesic - very noticeable moisture; flat to gently sloping
- 6 Mesic-moderate moisture; flat or shallow depressions
- 7 Mesic to subhygric - considerable moisture; depression: 10 to 50 cm deep
- 8 Subhygric - very considerable moisture; saturated but with < 5% standing water < 10 cm deep
- 9 Hygric - much moisture; up to 100% of surface under water 10 to 50 cm deep; lake margins, shallow ponds, streams
- 10 Hydric - very much moisture; 100% of surface under water 50 to 150 cm deep; lakes, streams

Soil Moisture (from Komárková 1983) (SCALAR)

- 1 Very dry - very little moisture; soil does not stick together
- 2 Dry - little moisture; soil somewhat sticks together
- 3 Damp - noticeable moisture; soil sticks together but crumbles
- 4 Damp to moist - very noticeable moisture; soil clumps
- 5 Moist - moderate moisture; soil binds but can be broken apart
- 6 Moist to wet - considerable moisture; soil binds and sticks to fingers
- 7 Wet - very considerable moisture; water drops can be squeezed out of soil
- 8 Very wet - much moisture can be squeezed out of soil
- 9 Saturated - very much moisture; water drips out of soil
- 10 Very saturated - extreme moisture; soil is more liquid than solid

Glacial Geology (CODE)

- | | |
|--------------------|------------------------|
| 1 Till | 6 Sag II till |
| 2 Outwash | 7 Sag I till |
| 3 Bedrock | 8 Anaktuvuk till |
| 4 Itkillik II till | 9 Gunsight Mountail ti |
| 5 Itkillik I till | 10 Undifferentiated ti |

Topographic Position (CODE)

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

Surficial Geomorphology (CODE)

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

Stability (CODE)

- 1 Stable
- 2 Subject to occasional disturbance
- 3 Subject to prolonged but slow disturbance such as solifluction
- 4 Annually disturbed
- 5 Disturbed more than once annually

Estimated Snow Duration (Code)

- 1 Snow free all year
- 2 Snow free most of winter; some snow cover persists after storm but is blown free soon afterward
- 3 Snow free prior to melt out but with snow most of winter
- 4 Snow free immediately after melt out
- 5 Snow bank persists 1-2 weeks after melt out
- 6 Snow bank persists 3-4 weeks after melt out
- 7 Snow bank persists 4-8 weeks after melt out
- 8 Snow bank persists 8-12 weeks after melt out
- 9 Very short snow free period
- 10 Deep snow all year

Exposure Scale (SCALAR)

- 1 Protected from winds
- 2 Moderate exposure to winds
- 3 Exposed to winds
- 4 Very exposed to winds

Aspect

- 0 = North-facing
 45 = Northwest-facing
 90 = West-facing
 135 = Southwest facing
 180 = South-facing
 225 = Southeast-facing
 270 = East-facing
 315 = Northeast-facing

Slope (DEGREES)

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