Environmental Site Factors Legend for Legacy (Barter Island and Barrow)

Supporting data for Elias et al. 1996[1] Key to codes & scalars

(Revised L. Druckenmiller 2015)

Landform (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 soughs
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 Residual surface
19 Spit
20 Residual surface- paleobeach
21 Marine terrace (beach ridge)

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 deposits
9 Lake or pond organic, sand, or silt
10 Undifferentiated sands
11 Undifferentiated clay
12 Road and gravel pads
13 Marine clay
14 Marine sands
15 Marine gravels
16 Marine clay and sand
17 Marine clay and gravel
18 Marine sands and gravel
19 Marine clay and sand and gravel
20 Alluvial sand and clay
21 Alluvial sands and gravels
22 Alluvial clay and sand and gravel
23 Organic deposits over alluvial sand and clay

Surficial Geomorphology (code)

1 Frost scars
2 Wetland hummocks
3 Turf hummocks
4 Gelifluction features
5 Srangmoor 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 High-centered polygons
19 Flat-centered polygons
20 Low-centered polygons
21 Mixed low and flat-centered polygons
22 Mixed high and flat-centered polygons
23 Mixed polygons
24 Small rises 6 to 10 cm between rises and troughs, not hummocks

Microsites (code)

1 frost-scar element
2 inter-scar element
3 strang or hummock
4 flark, interstrang, or inter-hummock
5 polygon center
6 polygon trough
7 polygon rim
8 stripe element
9 inter-stripe element
10 point bar (raised element)
11 Slough (wet element)
12 Edge of high-centered polygon, excluding trough
13 Polygon center (high-centered)
14 Polygon center (flat-centered)
15 Polygon center (low-centered)
16 Raised areas, not ice wedge cracks
17 Raised area between frost cracks
18 Area between flooded areas
19 None

Site moisture (scalar) modified from Kormárková (1983)

1.0 extremely xeric – almost no moisture
2.0 very xeric - very little moisture
3.0 xeric – little moisture
4.0 subxeric - noticeable moisture
5.0 subxeric to mesic very noticeable moisture
6.0 mesic moderate moisture

Legend for environmental site factors (continued)

Site moisture (scalar) modified from Kormárková (1983) (continued)
7.0 mesic to subhygric considerable moisture
8.0 subhygric <5% standing water, <10 cm deep
9.0 hygric -10-50 cm deep
10.0 hydric- 50-150 cm deep

Soil moisture (scalar) from Kormárková (1983)
1.0 very dry
2.0 dry
3.0 damp
4.0 damp to moist
5.0 moist
6.0 moist to wet
7.0 wet
8.0 very wet
9.0 saturated
10.0 very saturated

Topographic position (code)
1 hill crest or shoulder
2 side slope
3 footslope or toeslope
4 flat
5 drainage channel
6 depression
7 lake or pond

Soil Units
1 Pergelic Cryorthent, acid
2 Pergelic Cryosamment
3 Pergelic Cryohemist, euic
4 Pergelic Cryosaprist, euic
5 Lithic Pergelic Cryosaprist
6 Pergelic cryofibrist, euic
7 Histic Pergelic Cryoquept, acid
8 Histic Pergelic Cryoquept, nonacid
9 Pergelic Cryaquept, acid
10 Pergelic Cryochrept, nonacid
11 Pergelic Cryochrept
12 Pergelic Crumbrept
13 Rubptic-Lithic Cryumbrept
14 Pergelic Cryaquoll
15 Histic Pergelic Cryaquoll
16 Pergelic Cryoboroll
17 Marine gravel

Exposure (scalar)
1.0 protected from winds
2.0 moderate exposure
3.0 exposed
4.0 very exposed

Estimated snow duration (code)
1 snow free all year
2 snow free most of winter
3 snow free prior to melt out
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

Animal and Human Disturbance (scalar)
0.0 none
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 (code)
1 stable
2 subject to occasional disturbance
3 subject to prolonged but slow disturbance
4 annually disturbed
5 disturbed more than once annually

[1]Elias, S., S. K. Short, D. A. Walker, and N. A. Auerbach. 1996. Historical biodiversity at Remote Air Force Sites in Alaska. Legacy Resource Management Program Project #0742, Point Barrow and Barter Island Long Range Radar Sites, Alaska. Data Report, Institute of Arctic and Alpine Research, University of Colorado, Boulder, Colorado, USA.