

ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS



**INTRODUCTION**

The term vegetation is used to describe the landscape's plant cover as illustrated on the map. Three major vegetation growth forms (cover types) have been classified: these are forests, shrubs and herbaceous. Biological and physical factors determine the plant types and the character of their groupings (communities). Land cover is the non-vegetated landscape cover such as water bodies, snow and ice and barren.

For mapping, similar areas of plant or land cover were differentiated creating discrete enclosures called polygons. Each polygon is then identified with a particular descriptive name, or vegetation type, using the appropriate alphanumeric designator and symbol. NASA high altitude color infrared photographs, at a scale of 1:60,000, were interpreted using stereo pairs. Minimum polygon size for vegetation and land cover is 45 acres; for water, the minimum size is 10 acres. Base mapping was done on 1:250,000 scale orthorectified quad sheets. Budget constraints prohibited "ground truth" surveys.

The classification scheme used to make the calls on this map is based on the species and relative height of the vegetation present in the canopy. The vegetative ground canopy generally consists of 3 layers: the overstory, understory and the intermediates. The overstory is the tallest growth form present, the understory is next to the ground surface and the intermediates are between these in height. All layers are not necessarily always present. The growth forms found are forests, shrubs and herbaceous. Depending on the canopy present, any combination of these forms may be found and is indicated in the calling sequence.

**EXAMPLES**

Mixed forest by species, size and ground cover

white spruce (S) | overstory | understory (lichen (L))  
white birch (B) | |

pole & saw timber (P) | size | stocking (sparse canopy (S))

Tall shrub by stand species, moisture, stocking and ground cover

tall alder (A) | overstory | understory (low shrubs (L))  
tall willow (W) | |

moist area (M) | moisture | stocking (open canopy (O))

**NATIVE VEGETATION OF NORTHWEST ALASKA**

Designator	Forest (callings) designates sign
SW	White spruce
SB	Black spruce
WB	White birch
BP	Balsam poplar
GA	Quaking aspen
SB	White spruce & black spruce
SB	White spruce & white birch
SP	White spruce & balsam poplar
SB	White spruce & quaking aspen
SB	Black spruce & white birch
SB	Black spruce & balsam poplar
SB	White spruce & tall shrub
SB	White spruce & low shrub
SB	Black spruce & tall shrub
SB	Black spruce & low shrub
SB	Balsam poplar & tall shrub
SB	White spruce & low shrub
SB	Black spruce & low shrub
SB	White birch & low shrub
	<b>Tall shrub (call)</b>
GA	Alder
WO	Willow
OW	Alder & willow
	<b>Low shrub (call)</b>
MS	Mixed shrub (tundra)
MS	Alder & quaking aspen
MS	Dwarf birch
MS	Willow & shrub
MS	Lichen & shrub
MS	Willow
MS	Alder & willow
	<b>Herbaceous</b>
60	Undifferentiated herbaceous
61	Sedge (wet meadow)
62	Tussock tundra
63	Water sedge & muskox (bog-turf)
64	Low shrub & wet sedge
70	Dwarf shrub & lichen (mat & cushion)

**LAND COVER**

Designator	Land Cover Type
80	Lake & ponds
81	River & stream
82	Snow & ice
83	Burns (recent)
84	Barren
85	Airfield, mining area, etc

**FOREST MODIFIERS**

Designator	Tree Size	D.B.H. Range*
1	Seedlings & saplings	.05-4.9"
2	Pole timber-conifer	5.0-9.9"
3	Pole timber-hardwood	10.0-19.9"
4	Saw timber-conifer	20.0-29.9"
5	Saw timber-hardwood	30.0-39.9"
6	Mixed pole & saw timber	40.0-49.9"

**FOREST AND SHRUB MODIFIERS**

Designator	Canopy Closure
8	Sparse/woodland (10-24%)
9	Open (25-59%)
0	Closed (>59%)

**GROUND COVER**

Designator	Ground Cover
1	Alder
2	Willow
3	Tall shrub
4	Low shrub
5	Dwarf birch
6	Lichen
7	Old burn
8	Grass & grasslike plants
9	Barren

**MOISTURE**

Designator	Moisture
4	Dry
5	Moist
6	Wet

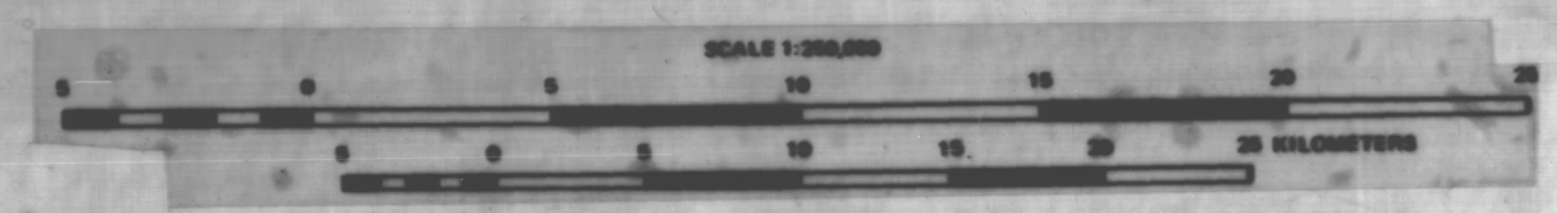
**WATER MODIFIERS**

Designator	Turbidity
0	Clear
1	Variable
2	Turbid

\* D.B.H. refers to the tree diameter at breast height (4 1/2' above ground level) measured on the upsize side of the tree.

BASE IMAGERY RECORDED WITH MULTISPECTRAL SCANNER (MS) ON NASA LANDSAT SATELLITE. NOMINAL ALTITUDE 500 KM (310 MILES). IMAGE PREPARED BY EARTH SATELLITE CORP. IN COOPERATION WITH THE STATE OF ALASKA FROM SPANDED, ENHANCED AND GEOMETRICALLY CORRECTED IMAGERY FITTED TO 1:250,000 USGS NOATAK QUADRANGLE BASE MAP (1955, Minor revisions 1959).

ALASKA  
QUADRANGLE LOCATION



1985 MAGNETIC DECLINATION AT SOUTH EDGE OF SHEET VARIES FROM 17°30' TO 19°30' EAST.

VEGETATION/LANDCOVER MAPPING BY E. BEGA, 1986. POLYGON DELINEATION AND CLASSIFICATION OF LAND COVER WAS ACCOMPLISHED BY USING THE NASA HIGH ALTITUDE CIR PHOTOGRAPHY IN STEREO WITH THE LANDSAT IMAGERY AS A BASE MAP. NO AERIAL NOR GROUND TRUTHING WAS DONE BY THIS INTERPRETER.

THIS REPORT HAS NOT BEEN READ BY THE DIRECTOR, HAS NOT RECEIVED OFFICIAL DGS PUBLICATION STATUS, AND SHOULD NOT BE QUOTED AS SUCH.

VEGETATION/LANDCOVER MAP OF THE NOATAK QUADRANGLE, ALASKA

1986

