VEGETATION SENSITIVITY

NO. 9 · 93P/3

Scale 1:50 000

Metres 1000 0 1000 2000 3000 4000 5000 6000 Metres

Miles 0 1 2 3 Miles

LEGEND

Explanation of Map Symbols

This map provides interpretations for vegetation sensitivity and is based on the ecological information presented on Map 8.

The expression "vegetation sensitivity" has been employed in a broad sense. In reality, all ecosystems are sensitive to certain levels of disturbance, with some ecosystems exhibiting more sensitivity than others. For present purposes, two overall types of vegetation sensitivity are recognized: (i) sensitivity which is inherent to the vegetation cover itself; and (ii) other forms of environmental sensitivity which are reflected in the characteristics of the vegetation cover. From these two overall types of sensitivity, five mapping groups have been developed:

VEGETATION SENSITIVITY MAP GROUP	SENSITIVITY * MAP UNIT SYMBOL	REASONS FOR SENSITIVITY
A		POSSIBLE EROSION PROBLEMS Units within Group A are presently colonized by vegetation which is indicative of possible soil erosion problems. Disturbance of the vegetation cover on erodible soils may be succeeded by both slow revegetation and a reduction in species diversity. Three types of vegetation units are included in Group A.
	A3	Units designated A3 usually represent a dense shrub cover of slide alder. They occur where the establishment of a regular coniferous forest has been prevented by avalanche activity and by the subsequent establishment of a dense cover of herbs and shrubs. Seepage is usually present and soils are unstable. Lush herbaceous meadows may be associated with the alder clumps on less steeply sloping terrain. Such broad-leaved communities would be vulnerable to trampling. Some grazing and browsing species are commonly present. (Units designated A1 and A2 do not occur on this map sheet).
B		WETLANDS Vegetation units within Group B are wetland ecosystems, usually developed on organic materials. Excessive moisture and high water tables will pose major technical problems. These vegetation units may offer significant recreational and visual values. Tree growth and regeneration processes operate slowly. Any disturbance of the hydrology of these communities may lead to changes in the vegetation cover.
	B1	Units designated B1 are organic wetlands with some degree of tree cover, although the latter is usually sparse to open. Tree species include black spruce, tamarack and/or lodgepole pine. The tamarack offers visually appealing colour contrasts in the autumn.
C		SENSITIVE VEGETATION Vegetation units within Group C consist of inherently sensitive plant communities. Some communities are physically sensitive to trampling, while others revegetate very slowly. Some communities are not necessarily sensitive in this sense but may be uncommon or even rare on a regional or provincial basis.
	C1	Units designated C1 are herbaceous meadows which have developed on fluvial deposits. Tree regeneration is inhibited by the prominence of a turfy horizon which is formed by the rich herbaceous plant cover (the latter being dominated by grasses and legumes). This ecological condition is often attributable to horse grazing pressures.
	C2	Units designated C2 are located within the krummholz subzone of the Subalpine Engelmann spruce-alpine fir zone. Revegetation is severely constrained by the high elevation, short growing season, and severe climate. These units typically offer important recreational and visual opportunities, but are normally sensitive to any disturbance which disrupts plant cover.
	C3	Units designated C3 consist of diverse herbaceous meadowlands in subalpine areas. Prolonged snowpack results in seepage during much of the growing season. Many broad-leaved plants occur in these units, and are susceptible to trampling. The meadows are judged to be too wet for tree regeneration. They contain several plant species which are utilized by wildlife, and may also provide significant recreational and visual opportunities.
	C4	Units designated C4 are treeless high-elevation areas which occur in the Alpine-tundra Zone. These alpine areas are dominated by cold-resistant vegetation (low-matted shrubs, herbs, and lichens). This unit is indicative of active periglacial(cold-climate) processes such as cryoturbation (frost heaving) and solifluction. Very short growing season and shallow soils occur. Vegetative cover is very slow to regenerate following disturbance.
D		FLOODPLAIN ECOSYSTEMS This group of units consists of ecosystems which are situated on the floodplains of streams. It is subdivided on the basis of the stage of successional development, flooding frequency, and depth of the water table. Communities in this group often contain plants which are susceptible to trampling.
	D1	Units designated D1 are edaphic climax shrub communities which are dominated by WILLOWS. They usually occur on recent fluvial deposits such as sand bars or gravel bars, and are periodically subject to flooding. They have also been mapped on Gleysols which are typically too wet for tree regeneration. Browse species such as red osier dogwood are important wildlife food sources in these units.
	D2	Units designated D2 are forested communities which are found on existing floodplains. They are subject to periodic flooding. The presence of black cottonwood suggests that flooding is fairly frequent. These units often constitute seral communities which are succeeding from an edaphic black cottonwood (or balsam poplar) climax to a white spruce forest as long-term water levels decline. Broad-leaved plants may be present and these are susceptible to trampling. The units contain important browse species for ungulates, and may also be significant both recreationally and visually.
	D3	Units designated D3 contain a mature edaphic climax of white spruce (or hybridized spruce). Flooding frequency is less than within D2-type units, although the water table is nevertheless sufficiently near the surface to maintain moist-to-wet moisture regimes. Other comments are as for the D2-type units.
E		SHALLOW SOILS This group of units is characterized by plant cover on shallow soils. Any disturbance of the already sparse vegetative cover readily leads to erosion and/or other physical degradation of the soil. Revegetation is likely to be a slow process due to both site dryness and the limited availability of suitable species.
	E1	Units designated E1 are characterized by the surface occurrence of bedrock or coarse rubble, and have little or no soil development. Various stages of primary succession may be in evidence. These units are often situated in subalpine areas where plant growth is restricted by severe climatic conditions.

* When a map symbol is followed by an asterisk (*), this indicates sensitive unit is a component of the total unit.

Composite Symbols

Composite units are employed where two or three types of vegetation sensitivity are intermixed or occupy such small areas that they cannot be designated as separate units at the scale of mapping. A slash symbol is used to indicate the relative amounts of each vegetation sensitivity condition as follows:

/ Vegetation sensitivity on the left is more abundant than the vegetation sensitivity on the right.

Notes

Not all areas that have erosion problems, flooding hazards, moisture excess, or shallow soils are indicated on this map. This map indicates relatively large areas where vegetation is a good indicator of these sensitive conditions. Maps 4 and 5 show additional areas where soil characteristics indicate these sensitive conditions also exist.

Additional interpretations using the FOREST ZONATION/PRESENT ECOLOGICAL CONDITION MAP (No. 8) are also possible. Refer to following publication for information in this regard:

Vegetation Resources of the Northeast Coal Study Area 1976 - 1977. Prepared by A. Harcombe, Resource Analysis Branch, B. C. Ministry of Environment, Kelowna, B C. (see Chapter 5 on Vegetation Interpretations).

Credits

Mapped by - A. Harcombe, Resource Analysis Branch, B. C. Ministry of Environment

Date of mapping - 1977

Drafted by - Cartographic Section, Resource Analysis Branch

Topographic base map provided by - Surveys and Mapping Branch, B. C. Ministry of Environment