

Canada Land Use Monitoring Program (CLUMP)

CLUMP LAND USE

1. Coverage Specifications

Original Map Scale: 1:50,000

Resolution : .000061035 of a degree

Map Projection : Universal Transverse Mercator (UTM)

Datum : NAD27

Spheroid : Clarke 1866

Units of Measure : meters

2. CLUMP Level II UTM Digital Data Enhancements

CLUMP Level II UTM digital data have undergone the following transformation from their original Level I representation:

a) The data are fully integrated with the corresponding Canada Land Inventory (CLI) shoreline layer, i.e. the CLUMP land use/land cover polygons are no longer extended into the water.

b) The data are projected to UTM.

c) For comparison and for analysis across census years, the data are 'cookie-cut' to a consistent study area boundary.

Note(s):

i) The CLI shoreline is based on older edition topographic base maps, which may no longer be current.

ii) The following UTM zone designation has been made during the projection of the data to UTM:

St. John's, Newfoundland UTM Zone 22

Halifax, Nova Scotia UTM Zone 20

St. John, New Brunswick UTM Zone 19 **

Chicoutimi, Quebec UTM Zone 19

Quebec, Quebec UTM Zone 19

Montreal, Quebec UTM Zone 18

Ottawa-Hull UTM Zone 18

Oshawa, Ontario UTM Zone 17

Toronto, Ontario UTM Zone 17

St.Catherines-Niagara, Ontario UTM Zone 17

Hamilton, Ontario UTM Zone 17

Kitchner, Ontario UTM Zone 17

London, Ontario UTM Zone 17

Windsor, Ontario UTM Zone 17

Sudbury, Ontario UTM Zone 17

Thunder Bay, Ontario UTM Zone 16

Winnipeg, Manitoba UTM Zone 14

Regina, Saskatchewan UTM Zone 13

Saskatoon, Saskatchewan UTM Zone 13

Edmonton, Alberta UTM Zone 12 **

Calgary, Alberta UTM Zone 11 **

Vancouver, British Columbia UTM Zone 10

Victoria, British Columbia UTM Zone 10

** these centers actually span more than one UTM zone

DO NOT ATTEMPT TO PROCESS OR VIEW DATA ACROSS UTM
ZONES.

iii) In the process of integrating the CLI shoreline with these data, every attempt has been made to conserve the look and contents of the original CLUMP manuscripts. To this end, a restricted small area dissolve procedure has been applied to the overlay results. We apologize if any of these small areas persists, or if small areas have been eliminated as a result of this procedure.

iv) There is no formal definition of the study area boundary which was utilized to 'cookie-cut' the land use data. In general, the study area boundary is larger than the Statistics Canada 'Urban Area' definition and smaller than the Statistics Canada 'Census Metropolitan Area'.

3. Attribute Schema (Polygon Attribute Table - PAT.DBF)

a) Standard ArcInfo Polygon Attribute Table (PAT) variables:

AREA Num 13,6 Area, in square meters

PERIMETER Num 13,6 Perimeter, meters

COVER_# Num 11,0 Standard ArcInfo Polygon Number

COVER_ID Num 11,0 Standard ArcInfo User ID

b) Original Digital Data Classification:

Use Char 1 The CLUMP Land Use Code

4. Valid CLUMP Land Use Codes

B - Urban built-up area

E - Mines, quarries, sand and gravel pits

O - Outdoor recreation

H - Horticulture

G - Orchards and vineyards

A - Cropland

P - Improved pasture and forage crops

K - Unimproved pasture and range land

T - Productive woodland

U - Non-productive woodland

M - Swamp, marsh or bog

S - Unproductive land - sand

L - Unproductive land - rock

8 - Unmapped areas

Z - Water areas

Note:

Original CLI data contained modifier codes for uses A and P. These codes expressed the percentage range of use of these agricultural centres. These codes have been removed in this CLUMP coverage to maintain consistency across all urban centres.

5. Narrative Description of CLUMP Land Use

The CLUMP land use classification divided the land into 13 classes, based on air photo interpretation, field surveys, and census information. The land use information was originally compiled on maps at a scale of 1:50,000. This information was later generalized to a scale of 1:250,000 and land use classes were combined where necessary to facilitate the input of information to the

computerized Geographic Information System. Only a handful of maps were selected for publication from that series of 1:250,000 maps; none were published at the 1:50,000 scale.

The land use information is valid only for the year in which the air photos were taken or the area was field checked. As evidenced on the few printed maps (Montreal, Truro, Woodstock, Winnipeg and Prince Edward Island), this

date varies from 1950 to 1970. The average date of the inventory as a whole may be considered as 1966 but there is as yet no supportive evidence to this assumption. It may also be considered as 1961 vintage based on the evidence that the 1961 census was utilized the separate cropland from improved pasture.

Some of the stated limits of the classification include:

The mapping does not reveal the socioeconomic factors intimately related to use of the land, such as size of farm unit or type of land tenure.

The mapping does not reflect degrees of productivity within classes.

The mapping does not reveal land capability.

The last four categories (productive woodland, unproductive woodland, swamps-marsh-or-bog, and unproductive land) are not 'use' classes, but rather refer to vegetative cover.

The separation of cropland and improved pasture was very difficult on air photos, particularly where field sizes were small. In most cases the ratio of cropland to improved pasture was determined from the 1961 census. In areas where extensive field work was carried out, such as in Quebec, partial separation was done. In the Prairie Provinces these classes were mapped separately using air photos.

The stated potential uses for these maps included:

a) as an information document for regional planning; for this, it is best used along with the land capability map series produced by the Canada Land Inventory.

b) as a historical document presenting the use of the land at a particular point in time.

c) as an educational tool in schools and universities.

6. CLI Land Use Code Descriptions

'B' Built-up area. Land occupied by cities, towns, and villages, or by isolated units away from settlements such as manufacturing plants, rail yards, and military camps. Parks and other open spaces within built-up areas are also included.

'E' Mines, quarries, sand and gravel pits, open excavations. Land used in the past or present for the extraction of earth materials.

'O' Outdoor recreation - Land used for private or public outdoor recreational purposes. Some examples are: golf courses, parks, beaches, summer cottage

areas, game preserves and historic sites.

'H' Horticulture, poultry and fur operations. Land used for intensive cultivation of vegetables and small fruits, includes market gardens, nurseries, flower and bulb farms and sod farms. Large scale commercial fur and poultry farms are also included because of their specialized agricultural nature.

'G' Orchards and vineyards. Land used for the production of tree fruits, hops and grapes.

'A' Cropland - Land used for annual field crops such as grain, oilseeds, sugar beets, tobacco, potatoes, field vegetables and canning crops. Associated

fallow, and land being cleared for field crops are also included.

'P' Improved pasture and forage crops.- Land used for improved pasture or for the production of hay and other cultivated fodder crops, including land being

cleared for these purposes.

'K' Rough grazing and range land. Areas of natural grasslands, sedges, herbaceous plants and abandoned farmland whether used for grazing or not. Bushes and trees may cover up to 25% of the area.

Intermittently wet hay lands (sloughs or meadows) are included as long as the land is utilized. Within some grassy, open woodlands, bushes and trees may exceed 25% cover if the area is actively grazed and no other use dominates.

'T' Productive woodland. Wooded land with trees having over 25% canopy cover and being over 20 feet in height approximately. Artificially restocked areas, or plantations are included regardless of age. Much cut-over and burned-over land is included.

'U' Non-productive woodland. Land covered by scrub growth.

'M' Swamp, marsh, or bog. Open wetlands except those which frequently dry up or show evidence of grazing or hay cutting.

'S' Sand, sand bars, sand flats, dunes and beaches - Unproductive unconsolidated land which does not support vegetation.

'L' Rock and other unvegetated surfaces - rock barrens, badlands, alkaline flats, gravel bars, eroded river banks, mine dumps. Unproductive land which does not support vegetation.

'Z' Additional code added during data integration for water areas based on the CLI shoreline maps.

For further information see "A Guide to the Classification of Land Use For the Canada Inventory", January, 1968.

7. Accreditation

The Canada Land Use Monitoring Program data extraction and distribution is managed by:

The Canada Centre for Remote Sensing

Natural Resources Canada

Government of Canada

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