

ISO 19131 Soils of Canada, Derived – Data Product Specification

Revision: A

Data product specification: Soils of Canada, Derived

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Data product specifications: Soils of Canada, Derived

1. OVERVIEW

1.1. Informal description

The “Soils of Canada” collection refers to data derived from the Soil Landscapes of Canada (SLC) or provincial Detailed Soil Surveys (DDS) datasets (maintained by CANSIS) and used for simplified analysis and/or mapping applications.

1.2. Data product specification metadata

This section provides metadata about the creation of this data product specification.

Data product specification title:	Soils of Canada, Derived
Data product specification reference date:	2013
Data product specification responsible party:	AAFC-AAC
Data product specification language:	EN
Data product specification topic category:	geoscientificInformation, farming

1.3. Terms and definitions

- Feature attribute
characteristic of a feature
- Class
description of a set of objects that share the same attributes, operations, methods, relationships, and semantics [UML Semantics]
NOTE: A class does not always have an associated geometry (e.g. the metadata class).
- Feature
abstraction of real world phenomena
- Object
entity with a well-defined boundary and identity that encapsulates state and behaviour [UML Semantics]
NOTE: An object is an instance of a class.
- Package
grouping of a set of classes, relationships, and even other packages with a view to organizing the model into more abstract structures

1.4. Abbreviations

AAFC	Agriculture and Agri-Food Canada
CANSIS	Canadian Soil Information Service
SLC	Soil Landscapes of Canada

2. SPECIFICATION SCOPE

This data specification has only one scope, the general scope.

NOTE: The term 'specification scope' originates from the International Standard ISO19131. 'Specification scope' does not express the purpose for the creation of a data specification or the potential use of data, but identifies partitions of the data specification where specific requirements apply.

3. DATA PRODUCT IDENTIFICATION

3.1. Data series identification

Title	Soils of Canada, Derived
Alternate Title	
Abstract	The “Soils of Canada, Derived” national scale thematic datasets display the distribution and areal extent of soil attributes such as drainage, texture of parent material, kind of material, and classification of soils in terms of provincial Detailed Soil Surveys (DDS) polygons, Soil Landscape Polygons (SLCs), Soil Order and Great Group. The relief and associated slopes of the Canadian landscape are depicted on the local surface form thematic dataset.
Purpose	The purpose of the “Soils of Canada, Derived” series is to facilitate the cartographic display and basic queries of the Soil Landscapes of Canada at a national scale. For more detailed or sophisticated analysis, users should investigate the full “Soil Landscapes of Canada” product.
Topic Category	geoscientificInformation
Spatial Reference Type	vector
Spatial Resolution	1:1 000 000
Geographic Description	Canada
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope identification	series

3.2. Data product identification

3.2.1. Thematic Soil Maps of Manitoba

Title	Thematic Soil Maps of Manitoba
Alternate Title	
Abstract	The “Thematic Soil Maps of Manitoba” is a revised and condensed version of the Manitoba Detailed Soils Database produced by CANSIS. It contains data relating to the soils slope, drainage, agricultural capability, erosion potential, and surface texture.
Purpose	
Topic Category	geoscientificInformation
Spatial Reference Type	vector

Spatial Resolution	
Geographic Description	Manitoba
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope Identification	dataset
Feature Attribute Names	Surface Texture, Soil Drainage, Soil Capability for Agriculture, Risk of Water Erosion, Slope

3.2.2. Thematic Soil Maps of Saskatchewan

Title	Thematic Soil Maps of Saskatchewan
Alternate Title	
Abstract	The "Thematic Soil Maps of Saskatchewan" is a revised and condensed version of the Saskatchewan Detailed Soils Database produced by CANSIS. It contains data relating to the soils slope, drainage, agricultural capability, erosion potential, and surface texture.
Purpose	
Topic Category	geoscientificInformation
Spatial Reference Type	vector
Spatial Resolution	
Geographic Description	Saskatchewan
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope Identification	dataset
Feature Attribute Names	Surface Texture, Soil Drainage, Soil Capability for Agriculture, Risk of Water Erosion, Slope

3.2.3. Agro-Pedological Atlas of Quebec

Title	Agro-Pedological Atlas of Quebec
Alternate Title	
Abstract	The "Agro-Pedological Atlas of Quebec" is a dataset that shows the characteristics, the fertility, the quality of the water regime, the vulnerability to degradation and the potential of the agricultural soils and land in the Monteregian region of the province of Quebec.
Purpose	
Topic Category	geoscientificInformation
Spatial Reference Type	vector

Spatial Resolution	
Geographic Description	Canada
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Soils
Scope Identification	dataset
Feature Attribute Names	Acidification vulnerability, Agricultural Land Capability Rating, Area (hectares), Available water (cm/100 cm soil), Available water (cm/50 cm soil), Calcium content of the A horizon, Calcium content of the B horizon, Calcium content of the C horizon, Cation exchange capacity (CEC) of the A horizon (m-eq./100g), Cation exchange capacity (CEC) of the B horizon (m-eq./100g), Cation exchange capacity (CEC) of the C horizon (m-eq./100g), Depth to bedrock, Improved drainage (subsurface drainage), Magnesium content of the A horizon (kg/ha), Magnesium content of the B horizon (kg/ha), Magnesium content of the C horizon (kg/ha), Name, Natural drainage, Organic matter content of the surface layer (0-25 cm), Permeability (cm/hr), Phosphorus content of the surface layer (kg/ha), Potassium content of the A horizon (kg/ha), Potassium content of the B horizon (kg/ha), Potassium content of the C horizon (kg/ha), Reaction of the A Horizon (water pH), Reaction of the B Horizon (water pH), Reaction of the C Horizon (water pH), Slope, Soil capability for agriculture, Soil compaction vulnerability, Soil vulnerability to ditch and watercourse bank instability, Soil vulnerability to ferric clogging of subsurface drains, Soil vulnerability to losses from leaching into groundwater, Soil vulnerability to physical clogging of subsurface drains, Soil vulnerability to upward migration of coarse fragments to the surface, Soil water erosion vulnerability (surface water pollution), Soil wind erosion vulnerability, Stoniness, Substratum (C horizon) carbonate content (CaCO ₃), Surface layer (0-25 cm) texture, Surface layer erodibility (K factor), Taxonomy (great group), Water stress risk, Smearing vulnerability, MAPUNITNOM, NAME, NOM

3.2.4. Soil Landscapes of Canada V.2.2/V.3.1 - Soil Order

Title	Soil Landscapes of Canada V.2.2/V.3.1 - Soil Order
Alternate Title	
Abstract	The "Soil Landscapes of Canada V.2.2/V.3.1 - Soil Order" displays the highest (most general) level of soil classification. Within the Canadian System of Soil Classification there are ten recognized soil orders (Soil Classification Working Group 1998). This system is hierarchical (from general to specific). Soil orders are further subdivided to great groups, subgroups, families, and series.
Purpose	The purpose of this dataset is to show the

	distribution of soil orders across Canada. This national map is derived from the 1:1M scale Soil Landscapes of Canada (SLC) database which contains the areal extent of every soil in each SLC polygon. Several attributes are described for each soil including soil order. The soil order map was created by totalling the areal extent of the various soil orders in each SLC polygon and displaying the dominant value.
Topic Category	geoscientificInformation
Spatial Reference Type	vector
Spatial Resolution	1:1 000 000
Geographic Description	Canada
Supplemental Information	Each soil order reflects the nature of their associated soil environment, and effects of the dominant soil forming processes. The development of a soil is the product of the soil forming factors, specifically the interaction between climate, vegetation, parent material, and topography, over time. The result is a unique range of soil types that are spatially distributed throughout Canada depending upon the combination/interaction of the variables associated with these soil forming factors. The Soil Order of Map of Canada graphically displays the occurrence and distribution of the ten recognized soil orders. The diagnostic characteristics of these orders are briefly described in terms of their distinguishing features and associated landscape characteristics.
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope Identification	dataset
Feature Attribute Names	Soil Landscape (v2.2 and v3.2) ID, English Soil Order Name, French Soil Order Name, Soil Order Percent

3.2.5. Soil Landscapes of Canada (SLC) derived from V3.1 and V2.2 – Cartographic 1M

Title	Soil Landscapes of Canada (SLC) derived from V3.1 and V2.2 – Cartographic 1M
Alternate Title	
Abstract	Soil Landscapes of Canada (SLC) derived from V3.1 and V2.2 – Cartographic 1M will provide a general overview of soil landscapes in Canada at a

	scale of 1: 1 Million.
Purpose	
Topic Category	geoscientificInformation
Spatial Reference Type	vector
Spatial Resolution	1:1 000 000
Geographic Description	Canada
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope Identification	dataset
Feature Attribute Names	Soil Landscape (v2.2 and v3.2) ID, Drainage Code, Drainage Code Percent, Kind of Material Code, Kind of Material Percent, Local Surface Form Code, Local Surface Form Percent, English Soil Order Code, French Soil Order Code, Soil Order Percent, Brunisolic Soil Order Percent, Chernozemic Soil Order Percent, Cryosolic Soil Order Percent, Gleysolic Soil Order Percent, Luvisolic Soil Order Percent, Organic Soil Order Percent, Podzolic Soil Order Percent, Regosolic Soil Order Percent, Solonetzic Soil Order Percent, Vertisolic Soil Order Percent, English Soil Great Group Code, French Soil Great Group Code, Soil Great Group Percent, English Brunisolic Great Group Code, French Brunisolic Great Group Code, Brunisolic Great Group Percent, English Chernozemic Great Group Code, French Chernozemic Great Group Code, Chernozemic Great Group Percent, English Cryosolic Great Group Code, French Cryosolic Great Group Code, Cryosolic Great Group Percent, English Gleysolic Great Group Code, French Gleysolic Great Group Code, Gleysolic Great Group Percent, English Luvisolic Great Group Code, French Luvisolic Great Group Code, Luvisolic Great Group Percent, English Organic Great Group Code, French Organic Great Group Code, Organic Great Group Percent, English Podzolic Great Group Code, French Podzolic Great Group Code, Podzolic Great Group Code, Podzolic Great Group Percent, English Regosolic Great Group Code, French Regosolic Great Group Code, Regosolic Great Group Percent, English Solonetzic Great Group Code, French Solonetzic Great Group Code, Solonetzic Great Group Percent, English Vertisolic

	Great Group Code, French Vertisolic Great Group Code, Vertisolic Great Group Percent
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3.2.6. Prairie Soil Zones of Canada

Title	Prairie Soil Zones of Canada
Alternate Title	
Abstract	The Prairie Soil Zones file shows the general distribution of major soil zones across the Prairie region of Canada. Soil zones (based on the Canadian System of Soil Classification) are named based on the dominant soil classification of the soils in each zone. Data extent is limited to the Agricultural Zone as defined in Soil Landscapes of Canada v 3.0 (Lefebvre et al. 2005).
Purpose	The Prairie Soil Zones file shows the distribution of soil zones within the agricultural regions of the Prairie provinces. These data can be used to support research, assess land productivity, and inform land use and land management decisions. This data product has been created for use in web applications.
Topic Category	farming
Spatial Reference Type	vector
Spatial Resolution	1:1 000 000
Geographic Description	Canada
Supplemental Information	The Prairie Soil Zones file is derived from the Soil Landscapes of Canada (SLC) v3.1.1 database which consists of relational files describing the location and content of polygons. SLC polygons are intended to be displayed at a scale of 1:1 000 000 (Shields et al. 1991) at which scale the smallest area that can be depicted accurately is approximately 10 000 ha.
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Soils
Scope Identification	dataset
Feature Attribute Names	English Soil Zone Name, French Soil Zone Name

3.2.7. Canadian Agricultural Extents derived from the Soil Landscapes of Canada (SLC) v3.0

Title	Canadian Agricultural Extents derived from the Soil Landscapes of Canada (SLC) v3.0
Alternate Title	
Abstract	The Agriculture Extents of Canada derived from the 2001 census of agriculture, based upon soil landscape of Canada polygons (Version 3).
Purpose	The data was developed as a interpretation of Agricultural land extents across Canada. This particular product was created for analytical purposes using the SLC. It is useful in conjunction with Census of Agriculture data.
Topic Category	farming
Spatial Reference Type	vector
Spatial Resolution	
Geographic Description	Canada
Supplemental Information	
Constraints	Data are subject to the Government of Canada Open Data Licence: http://www.data.gc.ca .
Keywords	Government of Canada Core Subject Thesaurus (2000-02-01) - Agriculture, Farmlands
Scope Identification	dataset
Feature Attribute Names	

4. DATA CONTENT AND STRUCTURE

4.1. Feature-based application schema

Canadian Agricultural Extents derived from the Soil Landscapes of Canada (SLC) v3.0	
Thematic Soil Maps of Manitoba	
DRAINAGE_CODE	NVARCHAR2 (15)
AGCAP_CODE	NVARCHAR2 (2)
EROSION_CODE	NVARCHAR2 (15)
SLOPE_CODE	NVARCHAR2 (15)
TEXTURE_CODE	NVARCHAR2 (20)
Soil Landscapes of Canada V.2.2/V.3.1 - Soil Order	
SLC_SOIL_ORDER_V31_22_ID	NVARCHAR2 (10)
SOIL_ORDER_NAME_EN	NVARCHAR2 (30)
SOIL_ORDER_NAME_FR	NVARCHAR2 (30)
SOIL_ORDER_PCNT	NUMBER (5)
Thematic Soil Maps of Saskatchewan	
DRAINAGE_CODE	NVARCHAR2 (15)
AGCAP_CODE	NVARCHAR2 (15)
EROSION_CODE	NVARCHAR2 (15)
SLOPE_CODE	NVARCHAR2 (15)
TEXTURE_CODE	NVARCHAR2 (20)
Prairie Soil Zones of Canada	
ZONE_FR	NVARCHAR2 (50)
ZONE_EN	NVARCHAR2 (30)
Soil Landscapes of Canada (SLC) derived from V3.1 and V2.2 - Cartographic 1M	
SLC_V31_22_ID	NVARCHAR2 (10)
DRAINAGE_CODE	NVARCHAR2 (2)
DRAINAGE_PCNT	NUMBER
KIND_MATERIAL_CODE	NVARCHAR2 (2)
KIND_MATERIAL_PCNT	NUMBER
LOCAL_SURFACE_FORM_CODE	NVARCHAR2 (10)
LOCAL_SURFACE_FORM_PCNT	NUMBER
SOIL_ORDER_CODE_EN	NVARCHAR2 (25)
SOIL_ORDER_CODE_FR	NVARCHAR2 (25)
SOIL_ORDER_PCNT	NUMBER
SOIL_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
SOIL_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
SOIL_GREAT_GROUP_PCNT	NUMBER
BRUNISOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
BRUNISOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
BRUNISOLIC_GREAT_GROUP_PCNT	NUMBER
CHERNOZEMIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
CHERNOZEMIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
CHERNOZEMIC_GREAT_GROUP_PCNT	NUMBER
CRYOSOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
CRYOSOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
CRYOSOLIC_GREAT_GROUP_PCNT	NUMBER
GLEYSOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
GLEYSOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
GLEYSOLIC_GREAT_GROUP_PCNT	NUMBER
LUVISOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
LUVISOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
LUVISOLIC_GREAT_GROUP_PCNT	NUMBER
ORGANIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
ORGANIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
ORGANIC_GREAT_GROUP_PCNT	NUMBER
PODZOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
PODZOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
PODZOLIC_GREAT_GROUP_PCNT	NUMBER
REGOSOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
REGOSOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
REGOSOLIC_GREAT_GROUP_PCNT	NUMBER
SOLONETZIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
SOLONETZIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
SOLONETZIC_GREAT_GROUP_PCNT	NUMBER
VERTISOLIC_GREAT_GROUP_CODE_EN	NVARCHAR2 (30)
VERTISOLIC_GREAT_GROUP_CODE_FR	NVARCHAR2 (30)
VERTISOLIC_GREAT_GROUP_PCNT	NUMBER
BRUNISOLIC_PCNT	NUMBER
CHERNOZEMIC_PCNT	NUMBER
CRYOSOLIC_PCNT	NUMBER
GLEYSOLIC_PCNT	NUMBER
LUVISOLIC_PCNT	NUMBER
ORGANIC_PCNT	NUMBER
PODZOLIC_PCNT	NUMBER
REGOSOLIC_PCNT	NUMBER
SOLONETZIC_PCNT	NUMBER
VERTISOLIC_PCNT	NUMBER
Agro-Pedological Atlas of Quebec	
MAPUNITNOM	NVARCHAR2 (60)
NOM	NVARCHAR2 (254)
NAME	NVARCHAR2 (254)
HECTARES	NUMBER (38,8)
SUPER_HA	NUMBER (38,8)
G_GROUP	NVARCHAR2 (8)
GRA1_2	NVARCHAR2 (9)
MO_A	NVARCHAR2 (2)
DRAI	NVARCHAR2 (3)
DRAI_S	NVARCHAR2 (3)
PERM	NVARCHAR2 (2)
PROC	NVARCHAR2 (2)
REU	NVARCHAR2 (2)
RE100	NVARCHAR2 (2)
DE	NVARCHAR2 (2)
DE_NDR	NVARCHAR2 (2)
PIER	NVARCHAR2 (2)
PENT7	NVARCHAR2 (3)
CAL	NVARCHAR2 (2)
ITC	NVARCHAR2 (2)
PH_GF	NVARCHAR2 (4)
LU	NVARCHAR2 (2)
CA_A	NVARCHAR2 (2)
CA_B	NVARCHAR2 (2)
CA_C	NVARCHAR2 (2)
CEC_A	NVARCHAR2 (2)
CECB	NVARCHAR2 (2)
CECC	NVARCHAR2 (2)
K_A	NVARCHAR2 (2)
KB	NVARCHAR2 (2)
KC	NVARCHAR2 (2)
MG_A	NVARCHAR2 (2)
MGB	NVARCHAR2 (2)
MGC	NVARCHAR2 (2)
NAB	NVARCHAR2 (2)
NAC	NVARCHAR2 (2)
P_A	NVARCHAR2 (2)
PB	NVARCHAR2 (2)
PC	NVARCHAR2 (2)
PH_A	NVARCHAR2 (5)
PH_B	NVARCHAR2 (4)
PH_C	NVARCHAR2 (4)
ACID	NVARCHAR2 (2)
BAT	NVARCHAR2 (2)
BERGES	NVARCHAR2 (2)
COLMP	NVARCHAR2 (2)
COLCH	NVARCHAR2 (2)
COM_DR	NVARCHAR2 (2)
COM_NDR	NVARCHAR2 (2)
EOL_DR	NVARCHAR2 (2)
EOL_NDR	NVARCHAR2 (2)
EROH	NVARCHAR2 (2)
K	NVARCHAR2 (2)
LES	NVARCHAR2 (2)
LES_NDR	NVARCHAR2 (2)
REMON	NVARCHAR2 (2)
TA	NVARCHAR2 (2)
PENT5	NVARCHAR2 (6)
TA2	NVARCHAR2 (2)

4.2. Feature catalogue – Soils of Canada, Derived

Title	Soils of Canada, Derived
Scope	Soils of Canada, Derived Series
Version Number	1.0
Version Date	2013-04-11
Producer	Agriculture and Agri-Food Canada

System-generated attributes (for example, OBJECTID, Shape, Shape Length and Area) are not defined in the feature catalog.

4.2.1. Feature attributes

4.2.1.1. Soil drainage

Name	Soil drainage (DRAINAGE_CODE)		
Definition	Soil Drainage shows the general distribution of soil drainage classes. The soil drainage classes represent the dominant value derived for each soil polygon. Soil drainage refers to the moisture status of the soil throughout the year. There are seven drainage classes recognized in Canada (Agriculture Canada Expert Committee on Soil Survey (ECSS) 1983). Some classes have been grouped to produce the categories.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very Rapidly drained		Water is removed from the soil very rapidly in relation to supply. Excess water flows downward very rapidly if underlying material is pervious. There may be very rapid subsurface flow during heavy rainfall provided there is a steep gradient. Soils have very low available water storage capacity (usually less than 2.5 cm) within the control section and are usually coarse

			textured, or shallow, or both. Water source is precipitation.
	Rapidly drained		Water is removed from the soil rapidly in relation to supply. Excess water flows downward if underlying material is pervious. Subsurface flow may occur on steep gradients during heavy rainfall. Soils have low available water storage capacity (2.5-4 cm) within the control section, and are usually coarse textured, or shallow, or both. Water source is precipitation.
	Well drained		Water is removed from the soil readily but not rapidly. Excess water flows downward readily into underlying pervious material or laterally as subsurface flow. Soils have intermediate available water storage capacity (4-5 cm) within the control section, and are generally medium textured and intermediate in depth. Water source is precipitation. On slopes subsurface flow may occur for short durations, but additions are equalled by losses.
	Moderately well drained		Water is removed from the soil somewhat slowly in relation to supply. Excess water is removed somewhat slowly due to low perviousness, shallow water table, lack of gradient, or

		<p>some combination of these. Soils have intermediate to high water storage capacity (5-6 cm) within the control section and are usually medium to fine textured. Precipitation is the dominant water source in medium to fine textured soils; precipitation and significant additions by subsurface flow are necessary in coarse textured soils.</p>
	Imperfectly drained	<p>Water is removed from the soil sufficiently slowly in relation to supply, to keep the soil wet for a significant part of the growing season. Excess water moves slowly downward if precipitation is the major supply. If subsurface water or groundwater, or both, is the main source, the flow rate may vary but the soil remains wet for a significant part of the growing season. Precipitation is the main source if available water storage capacity is high; contribution by subsurface flow or groundwater flow, or both, increases as available water storage capacity decreases. Soils have a wide range in available water supply, texture, and depth, and are gleyed phases of well drained subgroups.</p>
	Poorly drained	<p>Water is removed so slowly in relation to supply that the soil remains wet for a comparatively large</p>

		<p>part of the time the soil is not frozen. Excess water is evident in the soil for a large part of the time. Subsurface flow or groundwater flow, or both, in addition to precipitation are the main water sources; there may also be a perched water table, with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture, and depth, and are gleyed subgroups, Gleysols, and Organic soils.</p>
	Very poorly drained	<p>Water is removed from the soil so slowly that the water table remains at or on the surface for the greater part of the time the soil is not frozen. Excess water is present in the soil for the greater part of the time. Groundwater flow and subsurface flow are the major water sources. Precipitation is less important except where there is a perched water table with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture, and depth, and are either Gleysolic or Organic.</p>

4.2.1.2. Soil Drainage Percent

Name	Soil Drainage Percent (DRAINAGE_PCNT)
Definition	Percent coverage of the dominant soil drainage class within the SLC polygon
Aliases	

Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.3. Slope

Name	Slope (SLOPE_CODE)		
Definition	The slope classes represent the dominant value derived for each soil polygon. The term "slope" refers to the steepness of the landscape surface. Slope is expressed in percentage values defined as the vertical change in elevation over a horizontal distance. For the purposes of this data seven slope classes have been produced. An additional class is presented for unclassified areas that are dominated by rock, water or other nonsoils.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.4. Risk of water erosion

Name	Risk of water erosion (EROSION_CODE)		
Definition	The risk of water erosion classes represent the value derived for each soil polygon. Water erosion refers to the movement of soil from one area to another through the action of water. The Risk of Water Erosion displays five risk classes: very low, low, moderate, high, and very high. An additional class is presented for unclassified areas such as rock, water or undifferentiated soils.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.5. Soil capability for agriculture

Name	Soil capability of agriculture (AGCAP_CODE)		
Definition	The Soil capability for agriculture shows the general distribution of soil capability for agriculture classes. The soil capability for agriculture classes represent the dominant value derived for each soil polygon.		

	<p>The capability classes represent an interpretive classification of soils based on limitations affecting their agricultural use, and is supplemented by information concerning their general productive capacity for common field crops. The Soil capability for agriculture displays seven mineral soil capability classes that reflect the degree or severity of the limitations for their agricultural use, as well as a capability class for organic soils (improved and unimproved). In addition, a class for unclassified areas dominated by rock, water or other nonsoils (for example, mine spoils, industrial sites, gravel borrow pits, and urban areas) is also included.</p>		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Class 1	1	Soils in this class have no significant limitations in use for crops. These soils occur on level or gently sloping landscapes, they are deep (lacking a root restricting layer) well to imperfectly drained, have good water-holding capacity, and are naturally well supplied with plant nutrients. They are easily maintained in good till and fertility, and under good management they are moderately high to high in productivity for a wide range of field crops.
	Class 2	2	Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices. The soils are deep (lacking a root restricting layer), relatively well-supplied with plant nutrients, and have good water-holding capacity. They require careful soil

			management including conservation practices to prevent soil deterioration or to improve air and water relationships when the soils are cultivated. The limitations are not severe and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a fairly wide range of crops.
	Class 3	3	Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices. The limitations are more severe than for class 2 soils and conservation practices are usually more difficult to apply and maintain. The limitations adversely affect one or more of the following practices: the timing and ease of tillage, planting and harvesting; the choice of crops, and; the application of conservation practices. These soils have a moderate water-holding capacity imparted by the texture together with the regional climate. Under good management they are medium to moderately high in productivity for a fairly wide range of crops.
	Class 4	4	Soils in this class have severe

			<p>limitations that restrict the range of crops or require special conservation practices, or both. These soils have such limitations that they are only suitable for a few crops, or the yield for a range of crops is low, or the risk of crop failure is high. The limitations seriously affect one or more of the following practices: the timing and ease of tillage, planting and harvesting; the choice of crops, and; the application of conservation practices. These soils are low to medium in productivity for a narrow range of crops but may have higher productivity for a specially adapted crop. Class 4 soils typically include sandy soils (low water-holding capacity), soils occurring on moderate to strong slopes, saline soils, and soils with poor structure or other physical limitations such as stoniness or wetness.</p>
	<p>Class 5</p>	<p>5</p>	<p>Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible. The limitations are so severe that these soils are unsuited for the production of annual cultivated field crops. They may be improved by</p>

			the use of farm machinery for the production of native or tame species of perennial forage crops. The improvement practices may include clearing of bush, limited and carefully planned cultivation, seeding to perennial forage crops, fertilizing, herbicide application, and water control.
	Class 6	6	Soils in this class are capable only of producing native perennial forage crops, and improvement practices are not feasible. The soils have some natural sustained grazing capacity for farm animals, but the soil, climate or landscape limitations are so severe that the application of improvement practices is not practical. Soil areas may be placed in this class for a number of reasons: their physical nature (steep and complex slopes) prevents the use of farm machinery to improve them; they are not responsive to improvement practices; the presence of shallow standing water together with wet meadows; droughty areas characterized by sandy dune-form landscapes.
	Class 7	7	Soils in this class have no capability for arable agriculture or permanent pasture. All classified areas not

			included in Classes 1 to 6 (except organic soils) are placed in this class.
	Organic (O)	O	Improved or unimproved areas of organic soils.
	Unclassified (U)	U	Primarily various nonsoils, for example, rock, water, mine spoils, industrial sites, gravel borrow pits, and urban areas.

4.2.1.6. Surface texture

Name	Surface texture (TEXTURE_CODE)		
Definition	The Surface texture shows the distribution of soil surface texture. The surface texture groups represent the dominant value derived for each soil polygon. Soil texture classes are defined in terms of the relative proportions of sand, silt and clay which constitute the fine earth fraction ≤ 2 mm in size (Agriculture Canada Expert Committee on Soil Survey (ECSS) 1983). The eight groups represented reflect the amalgamation of thirteen texture classes into four general texture groups. In addition there are two groups for soils that include a high proportion of coarse fragments in the surface layer, a group for soils with high organic matter content in the surface layer, and a group for unclassified areas that are dominated by rock, water, other nonsoils.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Fine		Heavy clay, clay, silty clay, sandy clay
	Medium		Silty clay loam, clay loam, sandy clay loam, silt, silt loam, loam
	Moderately Coarse		Sandy loam
	Coarse		Loamy sand, sand
	Skeletal		Rock and mineral particles larger than 2 mm occupy 35% or more but less than 90% of the soil mass (by volume).
	Fragmental		Rock and mineral particles larger than 2 mm occupy 90% or more of the soil mass (by volume).

	Organic		Soil composed of ≥30% organic matter
	Unclassified		Rock, water, other nonsoils, undifferentiated soils

4.2.1.7. Soil Landscape (v2.2 and v3.2) ID

Name	Soil Landscape (v2.2 and v3.2) ID (SLC_SOIL_ORDER_V31_22_ID, SLC_V31_22_ID)		
Definition	Soil Landscapes of Canada polygon identifier		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.8. English Soil Order Name

Name	English Soil Order Name (SOIL_ORDER_NAME_EN)		
Definition	English name of the soil order		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.9. French Soil Order Name

Name	French Soil Order Name (SOIL_ORDER_NAME_FR)		
Definition	French name of the soil order		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.10. Soil Order Percent

Name	Soil Order Percent (SOIL_ORDER_PCNT)		
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Definition	Percent coverage of the soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.11. Kind of Material Code

Name	Kind of Material Code (KIND_MATERIAL_CODE)		
Definition	<p>The data is to show the distribution of surficial materials across Canada. This data is derived from the 1:1M scale Soil Landscapes of Canada (SLC) database which contains the areal extent of every soil in each SLC polygon.</p> <p>The categories describing the kind of materials are broad in scope. They describe the material found within the upper meter of the surface. Categories are based upon generally obvious features of the material. Bedrock outcrops and glaciers exemplify rock and ice categories, respectively. Cities and towns are typical of areas identified as unclassified. Mineral and organic materials are differentiated on the percent organic matter (less than 30% by weight for mineral and greater than 30% for organic). Areas of organic materials are typically exceedingly wet (water at or near the surface), and have unique surface forms and vegetative cover.</p>		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Ice	IC	Ice refers to areas of open bodies of open ice. Mountain glaciers and Arctic ice sheets typify this category.
	Mineral	M	Mineral materials contain sand, silt and clay as well as coarse fragments in variable proportions, but percent organic matter is less than 30%.
	Organic	O	Organic materials contain more that 30% organic matter by weight, and must be more than 40 cm thick. Organic

			wetlands such as fens, bogs, swamps, and salt marshes are landforms that typify this category.
	Rock	RK	Rock refers to consolidated material which is too hard to penetrate with a shovel (>3 on the Mohs scale of hardness). Bedrock outcrops and rockland typify this category.
	Unclassified	U or UR	Unclassified refers to landscapes where the kinds of material are unknown, altered by anthropogenic activity, or a complex of materials. Areas identified as undifferentiated soils or urban land are examples of this category.

4.2.1.12. Kind of Material Percent

Name	Kind of Material Percent (KIND_MATERIAL_PCNT)		
Definition	Percent coverage of the dominant kind of material class within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.13. Local Surface Form Code

Name	Local Surface Form Code (LOCAL_SURFACE_FORM_CODE)
Definition	<p>The purpose of this data is to show the distribution of local surface form features across Canada. This national data is derived from the 1:1M scale Soil Landscapes of Canada (SLC) database which contains the areal extent of recognized surface forms within each recognized polygon. The Local Surface Form data was created by totalling the areal extent of surface forms in each SLC polygon and displaying the dominant value.</p> <p>Local surface forms describe a recognizable form or physical features of the earth's surface. Each surface form is defined in terms of the slope gradient, relief, and overall appearance. The morphology of some surface forms is associated with the origin of the mineral parent</p>

	<p>materials (i.e. morainal hummocky landscapes vs. level to undulating glaciolacustrine landscapes). Nine surface form descriptors are recognized for describing the mineral material landscapes. Local surface forms for wetland landscapes are distinctly different from mineral landscapes. Therefore, there is a distinct suite of terms for surface forms associated with organic parent materials. For this map, nineteen recognized wetland surface forms are grouped into three broad categories based on surface form shape and appearance, and not on the origin of the organic parent material or pattern (Shields <i>et al.</i> 1991).</p>		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Level	L	A flat or very gently sloping, unidirectional surface with a generally constant slope unbroken by marked elevations and depressions. Slopes are generally <2%. Examples are floodplains and lake plains.
	Undulating	U	A very regular sequence of gentle slopes that extends from rounded and, in some places, confined concavities to broad, rounded convexities producing a wavelike pattern of low local relief. Slope length is generally <0.8 km and the dominant gradient of slopes is usually 2-5%. The terrain lacks an external drainage pattern. Examples are some ground moraines and lacustrine material of

			varying textures.
	Hummocky (or irregular)	H or K	A very complex sequence of slopes extending from somewhat rounded concavities (or swales) of various sizes to irregular conical knolls (or knobs) and short discontinuous ridges; there is a general lack of concordance between knolls and swales. Slopes are generally 4-70%. Includes knoll and kettle landscapes which are a chaotic sequence of knolls and kettles (or sloughs), which occupies 15-20% of an area and has no external drainage. Examples are hummocky moraines, hummocky fluvioglacial landforms, morainal plains, and hill lands.
	Dissected	D	A dissected (or gullied) pattern on steep and inclined surface forms. The incised gullies are the product of water erosion, past or present. This surface form is indicative of external drainage from the landscape.
	Inclined	I	A sloping, unidirectional surface with a generally constant slope unbroken by marked irregularity or gullies; a weakly developed dissected

			<p>pattern provides external drainage for the local area. Slopes are 2-70%; the form of inclined slopes is not related to the initial mode of origin of the underlying material.</p>
	Terraced	T	<p>Scarp face and the horizontal or gently inclined surface (bench land or tread) above it. An example is an alluvial terrace.</p>
	Rolling	M	<p>A very regular sequence of moderate slopes extending from rounded and, in some places, confined concave depressions to broad, rounded convexities producing a wavelike pattern of moderate relief. Slope gradients are generally >5% but may be less. This surface form is usually controlled by the underlying bedrock.</p>
	Ridged	R	<p>A long, narrow elevation of the surface, usually sharp crested with steep sides; ridges may be parallel, subparallel, or intersecting. Examples are eskers, crevasse fillings, washboard moraines and some drumlins.</p>
	Steep	S	<p>Erosional slopes of >70%, present on both consolidated and unconsolidated</p>

			materials. An example is an escarpment.
	Level Organic	FO or SW or MA or ZO	Includes all level bogs and fens, marshes, swamps
	Domed Organic	DO	Includes Domed and Atlantic Plateau Bogs
	Sloped Organic	SO	Includes Slope Bog and Fen
	Unclassified	IC or UR	

4.2.1.14. Local Surface Form Percent

Name	<i>Local Surface Form</i> Percent (LOCAL_SURFACE_FORM_PCNT)		
Definition	Percent coverage of the dominant local surface form class within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.15. Soil Order Code

Name	Soil Order Code (SOIL_ORDER_CODE, SOIL_ORDER_CODE_EN)		
Definition			
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Brunisolic	Brunisolic	
	Cryosolic	Cryosolic	
	Chernozemic	Chernozemic	
	Gleysolic	Gleysolic	
	Luvisolic	Luvisolic	
	Organic	Organic	
	Podzolic	Podzolic	
	Regosolic	Regosolic	
	Solonetzic	Solonetzic	
	Vertisolic	Vertisolic	

	Unclassified	Unclassified	
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4.2.1.16. French Soil Order Code

Name	French Soil Order Code (SOIL_ORDER_CODE_FR)		
Definition			
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Brunisolique	Brunisolique	
	Cryosolique	Cryosolique	
	Chernozémique	Chernozémique	
	Gleysolique	Gleysolique	
	Luvisolique	Luvisolique	
	Organique	Organique	
	Podzolique	Podzolique	
	Régosolique	Régosolique	
	Solonetzique	Solonetzique	
	Vertisolique	Vertisolique	
	Non classifié	Non classifié	

4.2.1.17. Soil Order Percent

Name	Soil Order Percent (SOIL_ORDER_PCNT)		
Definition	Percent coverage of the dominant soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.18. Brunsolc Soil Order Percent

Name	Brunsolc Soil Order Percent (BRUNISOLIC_PCNT)		
Definition	Percent coverage of the Brunsolc soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

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4.2.1.19. Chernozemic Soil Order Percent

Name	Chernozemic Soil Order Percent (CHERNOZEMIC_PCNT)		
Definition	Percent coverage of the Chernozemic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.20. Cryosolic Soil Order Percent

Name	Cryosolic Soil Order Percent (CRYOSOLIC_PCNT)		
Definition	Percent coverage of the Cryosolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.21. Gleysolic Soil Order Percent

Name	Gleysolic Soil Order Percent (GLEYSOLIC_PCNT)		
Definition	Percent coverage of the Gleysolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.22. Luvisolic Soil Order Percent

Name	Luvisolic Soil Order Percent (LUVISOLIC_PCNT)		
Definition	Percent coverage of the Luvisolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			

	Feature Attribute Value		
	Label	Code	Definition

4.2.1.23. Organic Soil Order Percent

Name	Organic Soil Order Percent (ORGANIC_PCNT)		
Definition	Percent coverage of the Organic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.24. Podzolic Soil Order Percent

Name	Podzolic Soil Order Percent (PODZOLIC_PCNT)		
Definition	Percent coverage of the Podzolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.25. Regosolic Soil Order Percent

Name	Regosolic Soil Order Percent (REGOSOLIC_PCNT)		
Definition	Percent coverage of the Regosolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.26. Solonetzic Soil Order Percent

Name	Solonetzic Soil Order Percent (SOLONETZIC_PCNT)		
Definition	Percent coverage of the Solonetzic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		

Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.27. Vertisolic Soil Order Percent

Name	Vertisolic Soil Order Percent (VERTISOLIC_PCNT)		
Definition	Percent coverage of the Vertisolic soil order within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.28. Soil Great Group Code

Name	Soil Great Group Code(SOIL_GREAT_GROUP_CODE, SOIL_GREAT_GROUP_CODE_EN)		
Definition			
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Chernozemic - Brown Chernozem	Brown Chernozem	
	Chernozemic - Dark Brown Chernozem	Dark Brown Chernozem	
	Chernozemic - Black Chernozem	Black Chernozem	
	Chernozemic - Dark Gray Chernozem	Dark Gray Chernozem	
	Vertisolic - Humic Vertisol	Humic Vertisol	
	Vertisolic - Vertisol	Vertisol	
	Brunisolic - Sombric Brunisol	Sombric Brunisol	
	Brunisolic - Eutric Brunisol	Eutric Brunisol	
	Brunisolic - Dystric Brunisol	Dystric Brunisol	
	Brunisolic - Melanic	Melanic Brunisol	

	Brunisol		
	Luvisolic - Gray Brown Luvisol	Gray Brown Luvisol	
	Luvisolic - Gray Luvisol	Gray Luvisol	
	Podzolic - Ferro-Humic Podzol	Ferro-Humic Podzol	
	Podzolic - Humo-Ferric Podzol	Humo-Ferric Podzol	
	Podzolic - Humic Podzol	Humic Podzol	
	Organic - Fibrisol	Fibrisol	
	Organic - Mesisol	Mesisol	
	Organic - Humisol	Humisol	
	Organic - Folisol	Folisol	
	Cryosolic - Static Cryosol	Static Cryosol	
	Cryosolic - Turbic Cryosol	Turbic Cryosol	
	Cryosolic - Organic Cryosol	Organic Cryosol	
	Gleysolic Order	Gleysol	
	Regosolic Order	Regosol	
	Solonetzic Order	Solonetzic	
	Unclassified	Unclassified	

4.2.1.29. French Soil Great Group Code

Name	Soil Great Group Code (SOIL_GREAT_GROUP_CODE_FR)		
Definition			
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Chernozémique - Chernozem brun	Chernozem brun	
	Chernozémique - Chernozem brun foncé	Chernozem brun foncé	
	Chernozémique - Chernozem noir	Chernozem noir	
	Chernozémique - Chernozem gris foncé	Chernozem gris foncé	
	Vertisolique - Vertisol humique	Vertisol humique	
	Vertisolique - Vertisol	Vertisol	

	Brunisolique - Brunisol sombrique	Brunisol sombrique	
	Brunisolique - Brunisol eutrique	Brunisol eutrique	
	Brunisolique - Brunisol dystrique	Brunisol dystrique	
	Brunisolique - Brunisol mélanique	Brunisol mélanique	
	Luvisolique - Luvisol brun-gris	Luvisol brun-gris	
	Luvisolique - Luvisol gris	Luvisol gris	
	Podzolique - Podzol ferro-humique	Podzol ferro-humique	
	Podzolique - Podzol humo-ferrique	Podzol humo-ferrique	
	Podzol humique	Podzol humique	
	Organique - Fibrisol	Fibrisol	
	Organique - Mésisol	Mésisol	
	Organique - Humisol	Humisol	
	Organique - Folisol	Folisol	
	Cryosolique - Cryosol statique	Cryosol statique	
	Cryosolique - Cryosol turbique	Cryosol turbique	
	Cryosolique - Cryosol organique	Cryosol organique	
	Ordre gleysolique	Gleysol	
	Ordre régosolique	Régosol	
	Ordre solonetzic	Solonetz	
	Non classifié	Non classifié	

4.2.1.30. Soil Great Group Percent

Name	Soil Great Group Percent (SOIL_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant soil great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.31. Brunisolic Great Group Code

Name	Brunisolic Great Group Code (BRUNISOLIC_GREAT_GROUP_CODE, BRUNISOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Brunisolic order exhibit enough soil development exempting them from the Regosolic order, but lack characteristic horizons associated with the remaining soil orders. Brunisols occur in a wide range of ecological areas thus are identified extensively throughout Canada.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Melanic Brunisol		Brunisolic soils that have a surface horizon (Ah or Ap) ≥10 cm in thickness and pH in some part of the B horizon of ≥5.5. Soils of the Melanic Brunisol great group typically occur in association with soils of the Eutric Brunisol great group.
	Eutric Brunisol		Brunisolic soils that have no surface horizon (Ah) or a surface horizon (Ah or Ap) <10 cm in thickness and pH in some part of the B horizon of ≥5.5. Soils of the Eutric Brunisol great group typically occur in association with soils of the Melanic Brunisol great group.
	Sombric Brunisol		Brunisolic soils that have a surface horizon (Ah or Ap) ≥10 cm in thickness and pH in some part of the B horizon of <5.5. Soils of the Sombric Brunisol great group typically occur in association with soils of the Dystric Brunisol great group.
	Dystric Brunisol		Brunisolic soils that have no surface horizon (Ah) or a

			surface horizon (Ah or Ap) <10 cm in thickness and pH in some part of the B horizon of <5.5. Soils of the Dystric Brunisol great group typically occur in association with soils of the Sombric Brunisol great group.
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4.2.1.32. French Brunisolic Great Group Code

Name	Brunisolic Great Group Code (BRUNISOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Brunisolic order exhibit enough soil development exempting them from the Regosolic order, but lack characteristic horizons associated with the remaining soil orders. Brunisols occur in a wide range of ecological areas thus are identified extensively throughout Canada.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Brunisol mélanique	Brunisol mélanique	Brunisolic soils that have a surface horizon (Ah or Ap) ≥10 cm in thickness and pH in some part of the B horizon of ≥5.5. Soils of the Melanic Brunisol great group typically occur in association with soils of the Eutric Brunisol great group.
	Brunisol eutrique	Brunisol eutrique	Brunisolic soils that have no surface horizon (Ah) or a surface horizon (Ah or Ap) <10 cm in thickness and pH in some part of the B horizon of ≥5.5. Soils of the Eutric Brunisol great group typically occur in association with soils of the Melanic Brunisol great group.
	Brunisol sombrique	Brunisol sombrique	Brunisolic soils that have a surface

			horizon (Ah or Ap) ≥ 10 cm in thickness and pH in some part of the B horizon of < 5.5 . Soils of the Sombric Brunisol great group typically occur in association with soils of the Dystric Brunisol great group.
	Brunisol dystrique	Brunisol dystrique	Brunisolic soils that have no surface horizon (Ah) or a surface horizon (Ah or Ap) < 10 cm in thickness and pH in some part of the B horizon of < 5.5 . Soils of the Dystric Brunisol great group typically occur in association with soils of the Sombric Brunisol great group.

4.2.1.33. Brunisolic Great Group Percent

Name	Brunisolic Great Group (BRUNISOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Brunisolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.34. Chernozemic Great Group Code

Name	Chernozemic Great Group Code (CHERNOZEMIC_GREAT_GROUP_CODE, CHERNOZEMIC_GREAT_GROUP_CODE_EN)
Definition	Soils of the Chernozemic order are characterized by the presence of a surface layer enriched with organic matter due to the decomposition of grasses and forbs representative of native grassland and grassland-forest communities. Typically, Chernozemic soils are associated with the Prairie Ecozone of Alberta, Saskatchewan and Manitoba. These soils also occur in the Peace River region of Alberta and British Columbia, as well as the BC Interior.
Aliases	
Producer	Agriculture and Agri-Food Canada
Value Data Type	Character
Value Domain Type	1 (enumerated)

Value Domain	Feature Attribute Value		
	Label	Code	Definition
	Brown Chernozem		These are soils that occur in the most arid segment of the climatic range of Chernozemic soils and have brownish-coloured surface horizons (Ah and/or Ap).
	Dark Brown Chernozem		These Chernozemic soils have surface horizons (Ah and/or Ap) somewhat darker in colour than soils of the Brown Chernozem great group.
	Black Chernozem		These Chernozemic soils have surface horizons (Ah and/or Ap) darker in colour and commonly thicker than soils of the Brown Chernozem and Dark Brown Chernozem great groups.
	Dark Gray Chernozem		These Chernozemic soils that occur in the most humid segment of the climatic range for Chernozemic soils and have surface horizons (Ah/Ahe and/or Ap) that are dark gray in colour.

4.2.1.35. French Chernozemic Great Group Code

Name	Chernozemic Great Group Code (CHERNOZEMIC_GREAT_GROUP_CODE_FR)
Definition	Soils of the Chernozemic order are characterized by the presence of a surface layer enriched with organic matter due to the decomposition of grasses and forbs representative of native grassland and grassland-forest communities. Typically, Chernozemic soils are associated with the Prairie Ecozone of Alberta, Saskatchewan and Manitoba. These soils also occur in the Peace River region of Alberta and British Columbia, as well as the BC Interior.
Aliases	
Producer	Agriculture and Agri-Food Canada
Value Data Type	Character
Value Domain Type	1 (enumerated)
Value Domain	

	Feature Attribute Value		
	Label	Code	Definition
	Chernozem brun	Chernozem brun	These are soils that occur in the most arid segment of the climatic range of Chernozemic soils and have brownish-coloured surface horizons (Ah and/or Ap).
	Chernozem brun foncé	Chernozem brun foncé	These Chernozemic soils have surface horizons (Ah and/or Ap) somewhat darker in colour than soils of the Brown Chernozem great group.
	Chernozem noir	Chernozem noir	These Chernozemic soils have surface horizons (Ah and/or Ap) darker in colour and commonly thicker than soils of the Brown Chernozem and Dark Brown Chernozem great groups.
	Chernozem gris foncé	Chernozem gris foncé	These Chernozemic soils that occur in the most humid segment of the climatic range for Chernozemic soils and have surface horizons (Ah/Ahe and/or Ap) that are dark gray in colour.

4.2.1.36. Chernozemic Great Group Percent

Name	Chernozemic Great Group (CHERNOZEMIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Chernozemic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.37. Cryosolic Great Group Code

Name	Cryosolic Great Group Code (CRYOSOLIC_GREAT_GROUP_CODE, CRYOSOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Cryosolic order are formed in either organic or mineral materials that have permafrost within 1 m of the surface, or within 2 m, if more than one third of the profile exhibits cryoturbation, as indicated by disrupted, broken or mixed horizons. Cryosolic soils occur throughout the Yukon, Northwest Territories and Nunavut, and large areas of northern Manitoba, Ontario and Quebec.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Turbic Cryosol		Cryosolic soils that are formed in mineral materials, have marked evidence of cryoturbation, and have permafrost within 2 m of the surface.
	Static Cryosol		Cryosolic soils that are formed in mineral materials, do not have marked evidence of cryoturbation, and have permafrost within 1 m of the surface.
	Organic Cryosol		Cryosolic soils that are formed primarily in organic materials and have permafrost within 1 m of the surface.

4.2.1.38. French Cryosolic Great Group Code

Name	Cryosolic Great Group Code (CRYOSOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Cryosolic order are formed in either organic or mineral materials that have permafrost within 1 m of the surface, or within 2 m, if more than one third of the profile exhibits cryoturbation, as indicated by disrupted, broken or mixed horizons. Cryosolic soils occur throughout the Yukon, Northwest Territories and Nunavut, and large areas of northern Manitoba, Ontario and Quebec.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			

	Feature Attribute Value		
	Label	Code	Definition
	Cryosol turbique	Cryosol turbique	Cryosolic soils that are formed in mineral materials, have marked evidence of cryoturbation, and have permafrost within 2 m of the surface.
	Cryosol statique	Cryosol statique	Cryosolic soils that are formed in mineral materials, do not have marked evidence of cryoturbation, and have permafrost within 1 m of the surface.
Cryosol organique	Cryosol organique	Cryosolic soils that are formed primarily in organic materials and have permafrost within 1 m of the surface.	

4.2.1.39. Cryosolic Great Group Percent

Name	Cryosolic Great Group (CRYOSOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Cryosolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.40. Gleysolic Great Group Code

Name	Gleysolic Great Group Code (GLEYSOLIC_GREAT_GROUP_CODE, GLEYSOLIC_GREAT_GROUP_CODE_EN)
Definition	Soils of the Gleysolic order display features indicative of prolonged periods of intermittent or continuous saturation with water and reducing conditions. Saturation with water is the result of a high groundwater table or temporary accumulation of water above an impermeable layer. Soils of this order are considered to be poorly and very poorly drained. Gleysolic soils occur throughout Canada, at variable proportions of the landscapes. They occur commonly in shallow depressions and on level lowlands. Within undulating and hummocky landforms, these soils often occupy the depressional areas, generally accounting for minor portions of the landscape. Great groups of this soil order reflect the localized variability of the associated landscapes with respect to vegetation and microclimate. As

	a result, various Gleysolic great groups may be recognized within landscapes containing poorly drained soils. Therefore, the distribution of individual great groups of this order is not displayed.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.41. French Gleysolic Great Group Code

Name	Gleysolic Great Group Code (GLEYSOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Gleysolic order display features indicative of prolonged periods of intermittent or continuous saturation with water and reducing conditions. Saturation with water is the result of a high groundwater table or temporary accumulation of water above an impermeable layer. Soils of this order are considered to be poorly and very poorly drained. Gleysolic soils occur throughout Canada, at variable proportions of the landscapes. They occur commonly in shallow depressions and on level lowlands. Within undulating and hummocky landforms, these soils often occupy the depressional areas, generally accounting for minor portions of the landscape. Great groups of this soil order reflect the localized variability of the associated landscapes with respect to vegetation and microclimate. As a result, various Gleysolic great groups may be recognized within landscapes containing poorly drained soils. Therefore, the distribution of individual great groups of this order is not displayed.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Gleysol	Gleysol	

4.2.1.42. Gleysolic Great Group Percent

Name	Gleysolic Great Group (GLEYSOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Gleysolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.43. Luvisolic Great Group Code

Name	Luvisolic Great Group Code (LUVISOLIC_GREAT_GROUP_CODE, LUVISOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Luvisolic order typically have a light-coloured, eluvial layer (Ae horizon) near the surface overlying a layer where silicate clay has accumulated (Bt horizon). Generally these soils develop in medium textured, base-saturated parent materials, under forest vegetation in subhumid to humid, mild to very cold climates. Luvisolic soils occur everywhere in Canada, from southern Ontario to the zone of permafrost, and from the West to East Coast.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Gray Brown Luvisol		Soils of this great group have a forest mull surface horizon (Ah horizon in which the leaf litter is usually quickly incorporated into the soil and humified as a result of high biological activity and the abundance of earthworms). Gray Brown Luvisols occur typically under deciduous or mixed forest vegetation in the St. Lawrence Lowland.
	Gray Luvisol		Luvisolic soils generally have well-defined forest floor L, F and H horizons and may have a degraded Ah or Ahe horizon that resembles the upper A horizon of Dark Gray Chernozemic soils.

4.2.1.44. French Luvisolic Great Group Code

Name	Luvisolic Great Group Code (LUVISOLIC_GREAT_GROUP_CODE_FR)
Definition	Soils of the Luvisolic order typically have a light-coloured, eluvial layer (Ae horizon) near the surface overlying a layer where silicate clay has accumulated (Bt horizon). Generally these soils develop in medium textured, base-saturated parent materials, under forest vegetation in subhumid to humid, mild to very cold climates. Luvisolic soils occur

	everywhere in Canada, from southern Ontario to the zone of permafrost, and from the West to East Coast.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Luvisol brun-gris	Luvisol brun-gris	Soils of this great group have a forest mull surface horizon (Ah horizon in which the leaf litter is usually quickly incorporated into the soil and humified as a result of high biological activity and the abundance of earthworms). Gray Brown Luvisols occur typically under deciduous or mixed forest vegetation in the St. Lawrence Lowland.
	Luvisol gris	Luvisol gris	Luvisolic soils generally have well-defined forest floor L, F and H horizons and may have a degraded Ah or Ahe horizon that resembles the upper A horizon of Dark Gray Chernozemic soils.

4.2.1.45. Luvisolic Great Group Percent

Name	Luvisolic Great Group (LUVISOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Luvisolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.46. Organic Great Group Code

Name	Organic Great Group Code (ORGANIC_GREAT_GROUP_CODE, ORGANIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Organic order are composed largely of organic materials (greater than 30% organic matter, by definition). These soils are generally called peat, muck, or bog and fen soils. Soils of this order are generally associated with poorly and very poorly drained depressional and level areas in regions of subhumid and perhumid climate. One exception is the Folisol great group which consists of organic matter of forest origin. Typically they occur in cool humid forest ecosystems, particularly on the West Coast of Canada. Organic soils are found in all provinces and territories, principally south of the 60th parallel.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain	Feature Attribute Value		
	Label	Code	Definition
	Folisol		Organic soils that are formed primarily in upland organic (folic) materials, generally of forest origin, and are rarely saturated with water.
	Fibrisol		Organic soils that are formed in relatively undecomposed, fibric organic materials, particularly in peat deposits dominated by sphagnum mosses, and are typically saturated with water.
	Mesisol		Organic soils that are formed in organic materials that are in an intermediate stage of decomposition and are typically saturated with water.
	Humisol		Organic soils that are formed in organic materials that are in an advanced stage of decomposition and are typically saturated with water.

4.2.1.47. French Organic Great Group Code

Name	Organic Great Group Code (ORGANIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Organic order are composed largely of organic materials (greater than 30% organic matter, by definition). These soils are generally called peat, muck, or bog and fen soils. Soils of this order are generally associated with poorly and very poorly drained depressional and level areas in regions of subhumid and perhumid climate. One exception is the Folisol great group which consists of organic matter of forest origin. Typically they occur in cool humid forest ecosystems, particularly on the West Coast of Canada. Organic soils are found in all provinces and territories, principally south of the 60th parallel.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Folisol	Folisol	Organic soils that are formed primarily in upland organic (folic) materials, generally of forest origin, and are rarely saturated with water.
	Fibrisol	Fibrisol	Organic soils that are formed in relatively undecomposed, fibric organic materials, particularly in peat deposits dominated by sphagnum mosses, and are typically saturated with water.
	Mésisol	Mésisol	Organic soils that are formed in organic materials that are in an intermediate stage of decomposition and are typically saturated with water.
	Humisol	Humisol	Organic soils that are formed in organic materials that are in an advanced stage of decomposition and are typically saturated with water.

4.2.1.48. Organic Great Group Percent

Name	Organic Great Group (ORGANIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Organic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.49. Podzolic Great Group Code

Name	Podzolic Great Group Code (PODZOLIC_GREAT_GROUP_CODE, PODZOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Podzolic order are characterized by the accumulation of amorphous material consisting of humified organic matter, in combination with aluminum (Al) and iron (Fe) in various amounts, in the B horizon. Typically Podzolic soils develop in coarse- to medium textured parent materials under forest and shrub vegetation, in cool and very cold humid to perhumid climates. In Canada, Podzolic soils occur extensively throughout British Columbia, and east of the Ontario - Manitoba provincial border.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Humic Podzol		These soils have a dark-colored podzolic B horizon ≥10 cm in thickness that contains very little extractable Fe. Humic Podzols occur typically in wet sites so that they are saturated with water during some periods of the year.
	Ferro-Humic Podzol		These soils have a dark-colored podzolic B horizon ≥10 cm in thickness with a high content of organic C and an appreciable amount of extractable Fe and Al.
	Humo-Ferric Podzol		These soils have a

			brownish-colored podzolic B horizon ≥10 cm in thickness with less organic matter than the B horizon of Ferro-Humic Podzols.
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4.2.1.50. French Podzolic Great Group Code

Name	Podzolic Great Group Code (PODZOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Podzolic order are characterized by the accumulation of amorphous material consisting of humified organic matter, in combination with aluminum (Al) and iron (Fe) in various amounts, in the B horizon. Typically Podzolic soils develop in coarse- to medium textured parent materials under forest and shrub vegetation, in cool and very cold humid to perhumid climates. In Canada, Podzolic soils occur extensively throughout British Columbia, and east of the Ontario - Manitoba provincial border.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Podzol humique	Podzol humique	These soils have a dark-colored podzolic B horizon ≥10 cm in thickness that contains very little extractable Fe. Humic Podzols occur typically in wet sites so that they are saturated with water during some periods of the year.
	Podzol ferro-humique	Podzol ferro-humique	These soils have a dark-colored podzolic B horizon ≥10 cm in thickness with a high content of organic C and an appreciable amount of extractable Fe and Al.
	Podzol humo-ferrique	Podzol humo-ferrique	These soils have a brownish-colored podzolic B horizon ≥10 cm in thickness with less organic matter than the B horizon of Ferro-Humic Podzols.

4.2.1.51. Podzolic Great Group Percent

Name	Podzolic Great Group (PODZOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Podzolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.52. Regosolic Great Group Code

Name	Regosolic Great Group Code (REGOSOLIC_GREAT_GROUP_CODE, REGOSOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Regosolic order do not exhibit a recognizable B horizon. This lack of soil development is a function of the following factors: youthfulness of the material (recent alluvium), instability of materials (active colluvium), type of material (active sand dunes), and climate (dry cold environments). These soils occur in a wide range of ecological areas, thus are identified extensively throughout Canada. The localized effect of wind and water erosion and resulting deposition of sediment influence the development of great groups within this soil order. Therefore a variety of Regosolic soils may be recognized within localized, relatively active, landscapes. As a result the distribution of individual great groups of this order is not displayed.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Regosol	Regosol	

4.2.1.53. French Regosolic Great Group Code

Name	Regosolic Great Group Code (REGOSOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Regosolic order do not exhibit a recognizable B horizon. This lack of soil development is a function of the following factors: youthfulness of the material (recent alluvium), instability of materials (active colluvium), type of material (active sand dunes), and climate (dry cold environments). These soils occur in a wide range of ecological areas, thus are identified extensively throughout Canada. The localized effect of wind and water erosion and resulting deposition of sediment influence the development of great groups within this soil order. Therefore a variety of Regosolic soils may be recognized within localized, relatively active, landscapes. As a result the distribution of individual great groups of this order is not displayed.		
Aliases			

Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Régosol	Régosol	

4.2.1.54. Regosolic Great Group Percent

Name	Regosolic Great Group (REGOSOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Regosolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.55. Solonetzic Great Group Code

Name	Solonetzic Great Group Code (SOLONETZIC_GREAT_GROUP_CODE, SOLONETZIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Solonetzic order develop on saline parent materials. During soil development, leaching of salts from upper layers results in the creation of a hard, columnar structured layer within the soil profile. The majority of Solonetzic soils are associated with grass and forb vegetation in the semiarid to subhumid Interior Plains. These soils occur primarily in Alberta and Saskatchewan, with minor occurrences in Manitoba and the interior of British Columbia. Great groups of this order are distinguishable at the site level; however, all great groups occur intimately within one localized soil landscape. Therefore for display purposes, the distribution of individual great groups of this order is not displayed.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Solonetzic	Solonetzic	

4.2.1.56. French Solonetzic Great Group Code

Name	Solonetzic Great Group Code (SOLONETZIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Solonetzic order develop on saline parent materials. During soil development, leaching of salts from upper layers results in the creation of a hard, columnar structured layer within the soil profile.		

	The majority of Solonetzic soils are associated with grass and forb vegetation in the semiarid to subhumid Interior Plains. These soils occur primarily in Alberta and Saskatchewan, with minor occurrences in Manitoba and the interior of British Columbia. Great groups of this order are distinguishable at the site level; however, all great groups occur intimately within one localized soil landscape. Therefore for display purposes, the distribution of individual great groups of this order is not displayed.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Solonetz	Solonetz	

4.2.1.57. Solonetzic Great Group Percent

Name	Solonetzic Great Group (SOLONETZIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Solonetzic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.58. Vertisolic Great Group Code

Name	Vertisolic Great Group Code (VERTISOLIC_GREAT_GROUP_CODE, VERTISOLIC_GREAT_GROUP_CODE_EN)		
Definition	Soils of the Vertisolic order develop in parent materials that contain more than 60% clay, of high shrink–swell potential. These soils exhibit internal movement, argillipedoturbation, resulting from severe shrinking (as evidenced by the presence of surface cracks extending to depths of 20 cm or more) during the drying cycle and swelling as the material expands upon wetting. The products of continued drying and wetting cycles are slickensides and intrusions of displaced materials within the profile, both diagnostic features of Vertisolic soil. Vertisols occur primarily in the Prairie Ecozone, within Alberta, Saskatchewan and Manitoba.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

	Vertisol		These soils have both a vertic and a slickenside horizon as specified for the Vertisolic order and a brownish-coloured surface horizon (Ah or Ap) that is not easily distinguishable from the rest of the soil profile.
	Humic Vertisol		These soils have both a vertic and a slickenside horizon as specified for the Vertisolic order and a surface horizon (Ah or Ap) that is darker in colour than soils of the Vertisol great group and easily distinguishable from the rest of the soil profile.

4.2.1.59. French Vertisolic Great Group Code

Name	Vertisolic Great Group Code (VERTISOLIC_GREAT_GROUP_CODE_FR)		
Definition	Soils of the Vertisolic order develop in parent materials that contain more than 60% clay, of high shrink–swell potential. These soils exhibit internal movement, argillipedoturbation, resulting from severe shrinking (as evidenced by the presence of surface cracks extending to depths of 20 cm or more) during the drying cycle and swelling as the material expands upon wetting. The products of continued drying and wetting cycles are slickensides and intrusions of displaced materials within the profile, both diagnostic features of Vertisolic soil. Vertisols occur primarily in the Prairie Ecozone, within Alberta, Saskatchewan and Manitoba.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Vertisol	Vertisol	These soils have both a vertic and a slickenside horizon as specified for the Vertisolic order and a brownish-coloured surface horizon (Ah or Ap) that is not easily distinguishable from the rest of the soil

			profile.
	Vertisol humique	Vertisol humique	These soils have both a vertic and a slickenside horizon as specified for the Vertisolic order and a surface horizon (Ah or Ap) that is darker in colour than soils of the Vertisol great group and easily distinguishable from the rest of the soil profile.

4.2.1.60. Vertisolic Great Group Percent

Name	Vertisolic Great Group (VERTISOLIC_GREAT_GROUP_PCNT)		
Definition	Percent coverage of the dominant Vertisolic great group within the SLC polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Integer		
Value Domain Type	0 (not enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.61. English Soil Zone Name

Name	English Soil Zone Name (ZONE_EN)		
Definition	English name of the Prairie Region Soil Zone		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Brown Soil Zone	Brown Soil Zone	The Brown soil zone occurs in the most arid segment of the Prairie region, in southwestern Saskatchewan and southeastern Alberta. The dry climate in this area supported native short-grass prairie vegetation. The Brown Chernozemic soils that dominate

			<p>this soil zone generally have thin, light brown coloured surface horizons (Ah or Ap) that reflect their generally low surface organic matter content.</p>
	<p>Dark Brown Soil Zone</p>	<p>Dark Brown Soil Zone</p>	<p>The Dark Brown soil zone occurs to the western and northern edge of the Brown soil zone, extending from the face of the Rocky Mountain foothills in southwestern Alberta to southeastern Saskatchewan. This semiarid zone receives more moisture that supports more productive grass and forb (non-woody) plant species than in the Brown soil zone. The Dark Brown Chernozemic soils that dominate this soil zone generally have surface horizons (Ah or Ap) that are somewhat darker in color and higher in organic matter content than the soils in the Brown soil zone.</p>
	<p>Black Soil Zone</p>	<p>Black Soil Zone</p>	<p>The Black soil zone extends in an expansive arc from the foothills of southwestern Alberta across north central Alberta and Saskatchewan, and ending in the Lake Manitoba Plain of southern Manitoba. The climate of the Black soil zone is cooler and more humid than the adjacent Dark Brown soil zone. This soil zone is transitional between the grasslands to the south and the boreal</p>

			<p>forest to the north. As such, the native vegetation is dominated by tall-grass and forb (non-woody) plant species or mixed grass, forb and tree cover. The Black Chernozemic soils that dominate this zone have surface horizons (Ah or Ap) that are darker in color, higher in organic matter content, and commonly thicker, than the soils of the Brown and Dark Brown soil zones. Soils in the Black zone are very productive agricultural soils for annual crop production, due to their high organic matter content and more abundant annual rainfall.</p>
	<p>Dark Gray Soil Zone</p>	<p>Dark Gray Soil Zone</p>	<p>The Dark Gray soil zone is a transitional zone that occurs as isolated islands throughout the Peace River region of northern British Columbia and Alberta, and discontinuously in an arc to the west and north of the Black soil zone from Alberta to Manitoba. The native vegetation is dominated by mixed plant species of trees, shrubs, forbs (non-woody species), and grasses in forest-grassland transition zones. The climate in the Dark Gray soil zone is generally wetter and colder than that found in the grassland-dominated soils zones to the south.</p>

			<p>The Dark Gray Chernozemic soils that dominate this zone have surface horizons (Ah/Ahe or Ap) that are dark gray in color, and have a moderate organic matter content.</p>
	<p>Gray Soil Zone</p>	<p>Gray Soil Zone</p>	<p>The Gray soil zone occurs primarily in the northern-most reaches of the Prairie region, including the Peace River region of northern British Columbia and Alberta and in a discontinuous belt interspersed with the Dark Gray soil zone in Saskatchewan and Manitoba. The native vegetation is dominated by mixed forest and the climate is classified as cold and subhumid. The Gray Luvisolic soils that dominate this zone generally have well-defined forest floor L, F and H horizons and a light gray eluvial Ae horizon, which has a platy structure and low organic matter content. Some soils in this zone also have dark gray Ah or Ahe horizons that resemble the upper A horizon of Dark Gray Chernozemic soils. The Luvisolic soils in this zone typically have a shorter growing season and fewer growing degree days, which may limit their use for some annual crops.</p>

4.2.1.62. French Soil Zone Name

Name	French Soil Zone Name (ZONE_FR)		
Definition	French name of the Prairie Region Soil Zone		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Zone de sol brun	Zone de sol brun	La zone de sol brun se trouve dans le segment le plus aride de la région des Prairies, au sud-ouest de la Saskatchewan et au sud-est de l'Alberta. Le climat sec de cette région favorise la végétation indigène d'herbe courte des Prairies. Les sols chernozémiques bruns qui dominent cette zone pédologique ont en général des horizons superficiels minces et colorés brun pâle (Ah ou Ap) qui reflètent la teneur superficielle généralement faible en matières organiques.
	Zone de sol brun foncé	Zone de sol brun foncé	La zone de sol brun foncé se trouve en bordure ouest et nord de la zone de sol brun, elle s'étend de la face des contreforts des montagnes Rocheuses au sud-ouest de l'Alberta jusqu'au sud-est de la Saskatchewan. Cette zone semi-aride reçoit plus d'humidité propice aux espèces plus productives d'herbes et de plantes herbacées (non ligneuses) que dans la zone des sols

			bruns. Les sols chernozémiques brun foncé qui dominent cette zone pédologique ont en général des horizons superficiels (Ah ou Ap) qui sont plutôt de couleur foncée et ont une teneur en matières organiques plus élevée que les sols de la zone des sols bruns.
	Zone de sol noir	Zone de sol noir	La zone de sol noir s'étend dans un grand arc entre les contreforts du sud-ouest de l'Alberta, en passant par le centre-nord de l'Alberta et la Saskatchewan, et la plaine du Lac Manitoba, au sud du Manitoba. Le climat de la zone de sol noir est plus frais et plus humide que ceux de la zone de sol brun foncé adjacente. Il s'agit d'une zone transitoire entre les Prairies au sud et la forêt boréale au nord. À ce titre, la végétation indigène est dominée par les espèces de plantes herbacées hautes et graminées hautes (non ligneuses) ou les herbes mixtes, les graminées et des arbres. Les sols chernozémiques noirs qui dominent cette région ont des horizons superficiels (Ah ou Ap) plus foncés, contenant plus de matières organiques et en général plus épais que les sols des zones de sols bruns et brun foncé. Les sols de la zone noire sont des sols agricoles très

			productifs pour les cultures annuelles, en raison de leur teneur élevée en matières organiques et des pluies annuelles plus abondantes.
	Zone de sol gris foncé	Zone de sol gris foncé	La zone des sols gris foncé est une zone transitoire présente sous forme d'îlots isolés dans l'ensemble de la région de Peace River au nord de la Colombie-Britannique et de l'Alberta et de forme discontinue dans un arc vers l'ouest et le nord de la zone de sol noir entre l'Alberta et le Manitoba. La végétation indigène est dominée par des espèces mixtes d'arbres, d'arbustes, d'herbacées (non ligneuses) et d'herbes dans une zone de transition entre la forêt et les Prairies. Le climat de la zone des sols gris foncé est en général plus humide et plus froid que ce que l'on retrouve dans les zones de sols surtout des Prairies vers le sud. Les sols chernozémiques gris foncé qui dominent dans cette zone ont des horizons de surface (Ah/Ahe ou Ap) qui sont de couleur gris foncé et ont une teneur en matières organiques modérées.
	Zone de sol gris	Zone de sol gris	La zone de sol gris se trouve surtout dans les confins les plus nordiques de la région des Prairies, incluant la région de Peace River au nord de la Colombie-

			<p>Britannique et de l'Alberta et dans une ceinture discontinue dispersée dans la zone de sols gris foncé de la Saskatchewan et du Manitoba. La végétation indigène est dominée surtout par la forêt mixte et le climat est classé comme froid et subhumide. Les sols luvisoliques gris qui dominent cette zone ont en général un sol L forestier bien défini, des horizons F et H et un horizon éluvial gris pâle qui a une structure lamellaire et une faible teneur en matières organiques. Certains sols de ces zones ont aussi des horizons gris foncé Ah ou Ahe qui ressemblent à l'horizon A supérieur des sols chernozémiques gris foncé. Les sols luvisoliques de cette zone ont en général une période de croissance plus courte et un moins grand nombre de degrés jours de croissance, ce qui peut limiter leur utilisation pour certaines cultures annuelles.</p>
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4.2.1.63. Acidification vulnerability

Name	Acidification vulnerability (ACID)
Definition	Soil acidification vulnerability.
Aliases	
Producer	Agriculture and Agri-Food Canada
Value Data Type	Character
Value Domain Type	1 (enumerated)
Value Domain	
	Feature Attribute Value

	Label	Code	Definition
		F	Low
		M	Moderate
		E	High
			Unclassified

4.2.1.64. Particle size distribution of materials (25-100 cm)

Name	Particle size distribution of materials (25-100 cm) (GRA1_2)		
Definition	Particle size distribution of materials (25-100 cm)		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Clayey	ARF, ARTF	
	Clayey over loamy	ARG/LOA	
	Clayey over sandy	ARG/SAB	
	Clayey over skeletal	ARF/SQ	
	Loamy over clayey	LOA/ARG	
	Loamy	LOAM	
	Loamy over skeletal	LOA/SQ	
	Sandy over clayey	SAB/ARG	
	Sandy over loamy	SAB/LOA	
	Sandy	SAB	
	Skeletal over clayey	SQ/ARG	
	Skeletal over loamy	SQ/LOA	
	Skeletal	SQ	
	Organic on mineral	ORG/MIN	
	Organic	ORG	
	Unclassified		

4.2.1.65. Area (hectares)

Name	Area (hectares) (HECTARES)
Definition	Area in hectares
Aliases	
Producer	Agriculture and Agri-Food Canada

Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.66. Available water (cm/100 cm soil)

Name	Available water (cm/100 cm soil) (RE100)		
Definition	The data shows available water for a 100-cm soil depth, i.e. water usable by deeprooted plans such as legumes (e.g. alfalfa).		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tb	<5 cm water/100 cm soil
	Low	b	5 - 7.5 cm water/100 cm soil
	Moderately low	mb	7.5 - 10 cm water/100 cm soil
	Moderate	m	10 - 15 cm water/100 cm soil
	High	e	15 - 20 cm water/100 cm soil
	Very high	te	≥20 cm water/100 cm soil
	Unclassified		

4.2.1.67. Available water (cm/50 cm soil)

Name	Available water (cm/50 cm soil) (REU)		
Definition	The data shows available water for a 50-cm soil depth, i.e. water usable by shallowrooted plants such as annual crops (e.g. corn) and grasses.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		

Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tb	<3 cm water/50 cm soil
	Low	b	3 - 6 cm water/50 cm soil
	Moderate	m	6 - 9 cm water/50 cm soil
	High	e	9 - 12 cm water/50 cm soil
	Very high	te	≥12 cm water/50 cm soil
	Unclassified		

4.2.1.68. Calcium content of the A horizon

Name	Calcium content of the A horizon (kg/ha) (CA_A)		
Definition	Calcium content of the A horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<1120 kg/ha
	Low	f	1120 – 3800 kg/ha
	Moderate	m	3800 – 6500 kg/ha
	High	e	6500 – 9200 kg/ha
	Very high	te	≥9200 kg/ha

4.2.1.69. Calcium content of the B horizon

Name	Calcium content of the B horizon (kg/ha) (CA_B)		
Definition	Calcium content of the B horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		

Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<1120 kg/ha
	Low	f	1120 – 3800 kg/ha
	Moderate	m	3800 – 6500 kg/ha
	High	e	6500 – 9200 kg/ha
	Very high	te	≥9200 kg/ha

4.2.1.70. Calcium content of the C horizon

Name	Calcium content of the C horizon (kg/ha) (CA_C)		
Definition	Calcium content of the C horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<1120 kg/ha
	Low	f	1120 – 3800 kg/ha
	Moderate	m	3800 – 6500 kg/ha
	High	e	6500 – 9200 kg/ha
	Very high	te	≥9200 kg/ha

4.2.1.71. Cation exchange capacity (CEC) of the A horizon (m-eq./100g)

Name	Cation exchange capacity (CEC) of the A horizon (m-eq./100g) (CEC_A)		
Definition	Cation exchange capacity (CEC) of the A horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<6 m-eq./100g

	Low	f	6 – 12 m-eq./100g
	Moderate	m	12 - 25 m-eq./100g
	High	e	25- 40 m-eq./100g
	Very high	te	≥40 m-eq./100g

4.2.1.72. Cation exchange capacity (CEC) of the B horizon (m-eq./100g)

Name	Cation exchange capacity (CEC) of the B horizon (m-eq./100g) (CECB)		
Definition	Cation exchange capacity (CEC) of the B horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<6 m-eq./100g
	Low	f	6 – 12 m-eq./100g
	Moderate	m	12 - 25 m-eq./100g
	High	e	25- 40 m-eq./100g
	Very high	te	≥40 m-eq./100g

4.2.1.73. Cation exchange capacity (CEC) of the C horizon (m-eq./100g)

Name	Cation exchange capacity (CEC) of the C horizon (m-eq./100g) (CECC)		
Definition	Cation exchange capacity (CEC) of the C horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<6 m-eq./100g
	Low	f	6 – 12 m-eq./100g
	Moderate	m	12 - 25 m-eq./100g
	High	e	25- 40 m-eq./100g
	Very high	te	≥40 m-eq./100g

4.2.1.74. Depth to bedrock

Name	Depth to bedrock (PROC)		
Definition	Depth to bedrock.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very shallow	tm	20 - 50 cm
	Shallow	m	50 – 100 cm
	Deep	p	≥100 cm
	Unclassified		

4.2.1.75. Improved drainage (subsurface drainage)

Name	Improved drainage (subsurface drainage) (DRAI_S)		
Definition	Improved drainage (subsurface drainage)		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Label	Code	Definition
	Rapid drainage	r	
	Good drainage	b	
	Moderately good drainage	mb	
	Imperfect drainage	l	
	Poor drainage	ma	
	Very poor drainage	tma	
	Unclassified		

4.2.1.76. Magnesium content of the A horizon (kg/ha)

Name	Magnesium content of the A horizon (kg/ha) (MG_A)
Definition	Magnesium content of the A horizon.

Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	< 100 kg/ha
	Low	f	100 – 400 kg/ha
	Moderate	m	400 – 700 kg/ha
	High	e	700 – 1000 kg/ha
	Very high	te	≥1000 kg/ha

4.2.1.77. Magnesium content of the B horizon (kg/ha)

Name	Magnesium content of the B horizon (kg/ha) (MGB)		
Definition	Magnesium content of the B horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	< 100 kg/ha
	Low	f	100 – 400 kg/ha
	Moderate	m	400 – 700 kg/ha
	High	e	700 – 1000 kg/ha
	Very high	te	≥1000 kg/ha
	Unclassified		

4.2.1.78. Magnesium content of the C horizon (kg/ha)

Name	Magnesium content of the C horizon (kg/ha) (MGB)		
Definition	Magnesium content of the C horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		

Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	< 100 kg/ha
	Low	f	100 – 400 kg/ha
	Moderate	m	400 – 700 kg/ha
	High	e	700 – 1000 kg/ha
	Very high	te	≥1000 kg/ha

4.2.1.79. Natural drainage

Name	Natural drainage (DRAI)		
Definition	Natural drainage.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Rapid drainage	r	
	Good drainage	b	
	Moderately good drainage	mb	
	Imperfect drainage	i	
	Poor drainage	ma	
	Very poor drainage	tma	
	Unclassified		

4.2.1.80. Organic matter content of the surface layer (0-25 cm)

Name	Organic matter content of the surface layer (0-25 cm) (MO_A)		
Definition	Organic matter content of the surface layer (0 - 25 cm).		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low (<3%)	tf	
	Low (3-4%)	f	
	Moderately low (4-5%)	fm	

	Moderate (5-7.5%)	m	
	Moderately high (7.5-9%)	me	
	High (9-15%)	e	
	Very high (15-30%)	te	
	Extremely high (>30%)	xe	
	Unclassified		

4.2.1.81. Permeability (cm/hr)

Name	Permeability (cm/hr) (PERM)		
Definition	Permeability is a measure of the ease with which gases and liquids can pass through a mass of soil. The permeability of a soil profile is deduced from the permeability of the surface layer (A horizon) and the permeability of the subsoil (B horizon) and substratum (C horizon) as obtained from soil studies. The permeability of the profile is that of the most restrictive layer in it (the impedance layer). The three classes are determined in accordance with hydraulic conductivity values, representing the volume of mobile water per unit soil volume traversed by the liquid.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Slow (<0.5 cm/hr)	L	Hydraulic conductivity (cm/hr)
	Moderate (0.5-15 cm/hr)	m	Hydraulic conductivity (cm/hr)
	Rapid (>15 cm/hr)	r	Hydraulic conductivity (cm/hr)
	Unclassified		

4.2.1.82. Phosphorus content of the surface layer (kg/ha)

Name	Phosphorus content of the surface layer (kg/ha) (P_A)
Definition	Phosphorus content of the surface layer.
Aliases	
Producer	Agriculture and Agri-Food Canada
Value Data Type	Character

Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	< 100 Kg/ha
	Low	f	100-200 Kg/ha
	Moderate	m	200-300 Kg/ha
	High)	e	300-400 Kg/ha
	Very high	Te	> 400 Kg/ha
	Unclassified		

4.2.1.83. Potassium content of the A horizon (kg/ha)

Name	Potassium content of the A horizon (kg/ha) (K_A)		
Definition	Potassium content of the A horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<110 Kg/ha
	Low	f	110-225 Kg/ha
	Moderate	m	225-390 Kg/ha
	High	e	390-500 Kg/ha
	Very high	Te	> 500Kg/ha
	Unclassified		

4.2.1.84. Potassium content of the B horizon (kg/ha)

Name	Potassium content of the B horizon (kg/ha) (KB)		
Definition	Potassium content of the B horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

	Very low	tf	<110 Kg/ha
	Low	f	110-225 Kg/ha
	Moderate	m	225-390 Kg/ha
	High	e	390-500 Kg/ha
	Very high	te	> 500Kg/ha
	Unclassified		

4.2.1.85. Potassium content of the C horizon (kg/ha)

Name	Potassium content of the C horizon (kg/ha) (KC)		
Definition	Potassium content of the C horizon.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Very low	tf	<110 Kg/ha
	Low	f	110-225 Kg/ha
	Moderate	m	225-390 Kg/ha
	High	e	390-500 Kg/ha
	Very high	te	> 500Kg/ha
	Unclassified		

4.2.1.86. Reaction of the A Horizon (water pH)

Name	Reaction of the A Horizon (water pH) (PH_A)		
Definition	The pH value of the A horizon, as measured in water, expresses the soil's degree of acidity or alkalinity. The pH value is a measure of active hydrogen, which largely controls the activity and equilibrium of the various elements that condition the way the soil functions (Magny and Baur 1962). It affects the uptake and availability of various nutrients, and acts on the toxicity of other elements. It follows that pH is a crucial factor for soil fertility and plant growth.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

	Extremely acidic	xac	Water pH <4.6
	Very strongly acidic	tfoac	Water pH 4.6-5.0
	Strongly acidic	foac	Water pH 5.0-5.5
	Moderately acidic	mac	Water pH 5.5-6.0
	Weakly acidic	faac	Water pH 6.0-6.5
	Neutral	n	Water pH 6.5-7.4
	Weakly alkaline	faal	Water pH 7.4-7.8
	Moderately alkaline	mal	Water pH 7.8-8.4
	Unclassified		

4.2.1.87. Reaction of the B Horizon (water pH)

Name	Reaction of the B Horizon (water pH) (PH_B)		
Definition	The pH value of the B horizon, as measured in water, expresses the soil's degree of acidity or alkalinity. The pH value is a measure of active hydrogen, which largely controls the activity and equilibrium of the various elements that condition the way the soil functions (Magny and Baur 1962). It affects the uptake and availability of various nutrients, and acts on the toxicity of other elements. It follows that pH is a crucial factor for soil fertility and plant growth.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Extremely acidic	xac	Water pH <4.6
	Very strongly acidic	tfoac	Water pH 4.6-5.0
	Strongly acidic	foac	Water pH 5.0-5.5
	Moderately acidic	mac	Water pH 5.5-6.0
	Weakly acidic	faac	Water pH 6.0-6.5
	Neutral	n	Water pH 6.5-7.4
	Weakly alkaline	faal	Water pH 7.4-7.8
	Moderately alkaline	mal	Water pH 7.8-8.4
	Unclassified		

4.2.1.88. Reaction of the C Horizon (water pH)

Name	Reaction of the C Horizon (water pH) (PH_C)
Definition	The pH value of the C horizon, as measured in water, expresses the

	soil's degree of acidity or alkalinity. The pH value is a measure of active hydrogen, which largely controls the activity and equilibrium of the various elements that condition the way the soil functions (Magny and Baur 1962). It affects the uptake and availability of various nutrients, and acts on the toxicity of other elements. It follows that pH is a crucial factor for soil fertility and plant growth.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Extremely acidic	xac	Water pH <4.6
	Very strongly acidic	tfoac	Water pH 4.6-5.0
	Strongly acidic	foac	Water pH 5.0-5.5
	Moderately acidic	mac	Water pH 5.5-6.0
	Weakly acidic	faac	Water pH 6.0-6.5
	Neutral	n	Water pH 6.5-7.4
	Weakly alkaline	faal	Water pH 7.4-7.8
	Moderately alkaline	mal	Water pH 7.8-8.4
	Unclassified		

4.2.1.89. Slope

Name	Slope (PENT7)		
Definition	Percent slope affords a means of describing relief by expressing the ratio between difference in level and horizontal distance. Five classes of simple slope (i.e. slopes with regular surfaces) were selected for mapping purposes. Percent slope is an important item of information for purposes of assessing areas that are vulnerable to water erosion and likely to cause surface water pollution.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Flat land or depressions	pl	<0.5%
	Very gentle	tfa	0.5-2%
	Gentle	fa	2-5%

	Moderate	m	5-9%
	Steep to abrupt	fo	>9%
	Unclassified		

4.2.1.90. Soil capability for agriculture

Name	Soil capability for agriculture (ITC)		
Definition	The agricultural land capability rating system developed by the Canada Land Inventory (CLI) comprises seven classes indicating the extent or intensity of limiting factors for mineral soils. The classes are subdivided by type of limitation. Marshall et al. (1979) modified this system for the St. Lawrence lowlands with a view to describing the extent of limiting factors more accurately.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Class 2	2	
	Class 3	3	
	Class 4	4	
	Class 5	5	
	Class 6	6	
	Class 7	7	
	Class 4 Organic soils	O4	
	Class 5 Organic soils	O5	
	Unclassified		

4.2.1.91. Soil compaction vulnerability

Name	Soil compaction vulnerability (COM_DR)		
Definition	Compaction means an increase in soil density, and it produces negative effects in the form of reduced permeability and root growth.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.92. Soil vulnerability to ditch and watercourse bank instability

Name	Soil vulnerability to ditch and watercourse bank instability (BERGES)		
Definition	Soil vulnerability to bank instability is arrived at from the particle size distribution in the profile (25-100 cm) and whether a contrasting layer is present between the subsoil (B) and the substratum (C) (e.g. a sandy layer over a clay layer). The assessment model shows organic and sandy soils as being highly vulnerable, while loamy soils and soils with a contrasting layer are identified as moderately vulnerable.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.93. Soil vulnerability to ferric clogging of subsurface drains

Name	Soil vulnerability to ferric clogging of subsurface drains (COLCH)		
Definition	Soil vulnerability to ferric clogging of subsurface drains.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Not applicable	na	
	Unclassified		

4.2.1.94. Soil vulnerability to losses from leaching into groundwater

Name	Soil vulnerability to losses from leaching into groundwater (LES)		
Definition	Soil vulnerability to losses from leaching into groundwater.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.95. Soil vulnerability to physical clogging of subsurface drains

Name	Soil vulnerability to physical clogging of subsurface drains (COLMP)		
Definition	Soil vulnerability to physical clogging of subsurface drains.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Not applicable	na	
	Unclassified		

4.2.1.96. Soil vulnerability to upward migration of coarse fragments to the surface

Name	Soil vulnerability to upward migration of coarse fragments to the surface (REMON)		
Definition	Soil vulnerability to upward migration of coarse fragments to the surface as a result of human action aimed at drainage improvement.		
Aliases			
Producer	Agriculture and Agri-Food Canada		

Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.97. Soil water erosion vulnerability (surface water pollution)

Name	Soil water erosion vulnerability (surface water pollution) (EROH)		
Definition	Soil water erosion vulnerability (surface water pollution).		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.98. Soil wind erosion vulnerability

Name	Soil wind erosion vulnerability (EOL_DR)		
Definition	Soil wind erosion vulnerability.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	

	Unclassified		
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4.2.1.99. Stoniness

Name	Stoniness (PIER)		
Definition	Stoniness is the relative proportion of stones on the soil surface. Stones are, by definition, coarse fragments 25 to 60 cm in diameter. The number, size and spacing of these coarse fragments on the surface represent constraints for the use of the soil and farming practices.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Not stony	np	Spacing between stones ≥30 m
	Slightly stony	lp	Spacing between stones 10-30 m
	Moderately stony	mp	Spacing between stones 2-10 m
	Very stony	tp	Spacing between stones 1-2 m
	Unclassified		

4.2.1.100. Substratum (C horizon) carbonate content (CaCO3)

Name	Substratum (C horizon) carbonate content (CaCO3) (CAL)		
Definition	Substratum (C horizon) carbonate content.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Non-calcareous (<1 %)	nc	<1% CaCO3
	Weakly calcareous (1-6 %)	fa	1-6% CaCO3
	Strongly calcareous (6-40 %)	fo	6-40% CaCO3

	Unclassified		
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4.2.1.101. Surface layer (0-25 cm) texture

Name	Surface layer (0-25 cm) texture (TA2)		
Definition	Surface layer (0 - 25 cm) texture.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Peaty	0	Peaty surface layer (≥17% organic C
	Coarse	1	Coarse sand (CS), medium sand (S), fine sand (FS), very fine sand (VFS) and loamy sand (CLS, LS, FLS)
	Medium Coarse	2	Very fine loamy sand (VFLS) and coarse to fine loamy sand (CLS, LS, FLS)
	Medium	3	Very fine sandy loam (VFSL), loam (L) and silty loam (SiL)
	Medium fine	4	Sandy clay loam (SCL), clay loam (CL) and silty clay loam (SiCL)
	Fine	5	Sandy clay (SC), clay (C), silty clay (SiC) and heavy clay (HC)
	Unclassified		

4.2.1.102. Surface layer erodibility (K factor)

Name	Surface layer erodibility (K factor) (K)		
Definition	Surface layer erodibility (K factor).		
Aliases			
Producer	Agriculture and Agri-Food Canada		

Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Negligible	n	
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.103. Taxonomy (great group)

Name	Taxonomy (great group) (G_GROUP)		
Definition	Taxonomy (great groups).		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Dystric brunisol	BDY	
	Eutric brunisol	BE	
	Melanic brunisol	BM	
	Sombric brunisol	BS	
	Gleysol	G	
	Humic gleysol	GH	
	Humic podzol	PH	
	Humo-ferric podzol	PHF	
	Ferro-humic podzol	PFH	
	Organic	O	
	Unclassified		

4.2.1.104. Water stress risk

Name	Water stress risk (DE)		
Definition	Water stress risk.		
Aliases			
Producer	Agriculture and Agri-Food Canada		

Value Data Type	Character		
Value Domain Type	1 (enumerated)		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Water deficit risk slight to negligible	1	
	Water deficit risk moderate	2	
	Water deficit risk high	3	
	Water saturation risk	4	
	Unclassified		

4.2.1.105. Smearing vulnerability

Name	Smearing vulnerability (BAT)		
Definition	Smearing vulnerability.		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition
	Low	f	
	Moderate	m	
	High	e	
	Unclassified		

4.2.1.106. MAPUNITNOM

Name	MAPUNITNOM		
Definition	Soil polygon identifier		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.107. NAME

Name	NAME		
Definition	English name of the soil polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

4.2.1.108. NOM

Name	NOM		
Definition	French name of the soil polygon		
Aliases			
Producer	Agriculture and Agri-Food Canada		
Value Data Type	Character		
Value Domain Type	Not enumerated		
Value Domain			
	Feature Attribute Value		
	Label	Code	Definition

5. REFERENCE SYSTEM

5.1. Spatial reference system

Horizontal coordinate reference system:WGS84

Map projection: Web Mercator Auxiliary Sphere; EPSG:3857; Version 8.1.4

5.2. Temporal reference system

Gregorian calendar

6. DATA QUALITY

Measure not defined at this time

6.1. Completeness

6.2. Logical consistency

6.3. Positional accuracy

6.4. Temporal accuracy

6.5. Thematic accuracy

6.6. Lineage statement

Lineage Statement	These datasets were derived from CANSIS datasets (Soil Landscapes of Canada or Provincial Detailed Soils datasets) in order to support web mapping applications and to facilitate cartographic representations.
Scope	Soils of Canada, Derived

7. DATA CAPTURE

8. DATA MAINTENANCE

As needed

9. PORTRAYAL

Not applicable.

10. DATA PRODUCT DELIVERY

Delivery medium information:

units of delivery: package
 medium name: online via HTTP, online via direct access

Delivery format information:

File Geodatabase

format name: Esri Geodatabase (File-based)
 format version: 10.1
 specification: A collection of various types of GIS datasets held in a file system folder.
<http://arcgis.com>

languages: eng
 character set: utf8

GML

format name: Geography Markup Language
 format version: 2.0
 specification: Open Geospatial Consortium Inc., OpenGIS®Geography Markup Language (GML) Implementation Specification, Version 3.1.1, 2004-02-07, Reference number of this OGC® project document: 03-105r1

(http://portal.opengeospatial.org/files/?artifact_id=4700)

languages: eng
character set: utf8

csv
format name: Comma Delimited
format version: 1.0
specification: A delimited data format that has fields/columns separated by the comma character
languages: eng
character set: utf8

11. METADATA

The metadata requirements follow the Government of Canada's Treasury Board Standard on Geospatial Data (ISO 19115).