The Soils of The Regional Municipality of Ottawa-Carleton

(excluding the Ottawa Urban Fringe)

Volume 2

Ministry of Agriculture and Food
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Direction de la recherche

THE SOILS OF THE REGIONAL MUNICIPALITY OF OTTAWA-CARLETON

(excluding the Ottawa Urban Fringe)

Volume 2

REPORT NO. 58
OF THE
ONTARIO INSTITUTE OF PEDOLOGY

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and
E.A. Wilson

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The Ontario Institute of Pedology has the responsibility of coordinating activities in soil resource inventories and related research in the genesis, morphology, classification, characterization, and interpretation of Ontario soils.

The Institute consists of three cooperating agencies, namely Agriculture Canada, the Ontario Ministry of Agriculture and Food, and the University of Guelph. These agencies provide on-going support for Institute programs through the Land Resource Research Centre, Research Branch of Agriculture Canada, the Soil and Water Management Branch of the Ontario Ministry of Agriculture and Food, and the Department of Land Resource Science of the University of Guelph. Staff from each of these agencies contribute to the programs of the Institute.

Additional support from the Institute's programs and also cooperation is received from time to time from other agencies, such as the Ontario Ministry of Natural Resources and Environment Canada.

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Laboratory analyses were primarily conducted by the Soil Characterization Laboratory of the Ontario Institute of Pedology, located at the University of Guelph. Some analyses, including all analyses for the organic soils, were carried out by the Service Laboratory of the Land Resource Research Centre, Agriculture Canada, Ottawa. Engineering test data were provided by the Aggregates Section Laboratory of the Highway Engineering Division, Ontario Ministry of Transportation and Communications, Toronto.

Preparation of the manuscript for printing was done by the Cartography Unit of the Department of Land Resource Science, University of Guelph. Special thanks are extended to D.E. Irvine and S. Knox who were responsible for the design and layout. Word processing of the manuscript was done by M. Kaczorowski and K. Palmer of the Ontario Institute of Pedology.

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TABLE OF CONTENTS

This volume of the report consists mainly of detailed morphological, physical and chemical descriptions of typical soils of the Ottawa-Carleton Region. In addition, there are two tables of engineering test data for some of the more commonly occurring soils in the Region. The analytical methods used to obtain chemical, physical, and engineering test data are also briefly outlined.

Volume 1 of the report contains descriptions of the climatological and geologic settings of the soils, general descriptions of the soils, and soil interpretations.

HOW TO USE THE SOIL MAPS AND REPORT

The soil maps and report have been prepared with the intention of providing basic soil information for many users. For this reason, they contain a wide range of information which can be used to answer many questions. In general terms, however, most of the information provided can be placed into one of two general categories: (a) the nature and properties of the soils which occur within the land areas of the Region, and (b) interpretive information which can be used when making land management or land use decisions.

To use the soil maps and report efficiently the following procedure should be followed:

(1) Locate the area of interest in the "Soil Map Index" included with each volume. Determine the appropriate soil map for the area.

(2) Open the appropriate soil map, and locate your specific area of interest. Natural and cultural features on the map, such as streams, roads, lot and concession numbers, should assist in location.

(3) Note the map unit symbol or symbols shown within the map delineations which encompass your area of interest.

(4) Find the section on the map titled "Explanation of Map Unit Symbols". This section explains the types of map symbols and their respective components. A map symbol may consist of one or more components, depending on the type of land area it represents and the landscape features which may exist. More detailed explanations of map symbols and components are given in the section of the report titled "Definitions of Terms Associated with the Soil Maps and Legend".

(5) Brief descriptions of all symbol components are provided in the border areas of each map. Locate in the Legend the specific Soil Landscape Unit, Land Type Unit, or Miscellaneous Land Unit shown in the symbol. Locate the specific slope class, stoniness or rockiness class, or soil phase shown in the symbol in the appropriate border section which describes those landscape features. Detailed definitions of these are given in Appendix 1 of Volume 1 of the report.

(6) For more detailed information on specific Soil Landscape, Land Type, or Miscellaneous Land Units, locate them in Volume 1 of the report. Such information can be found in the section titled "General Descriptions of Soil Associations, Land Types and Miscellaneous Land Units".

(7) For specific types of soil interpretations, refer also to Volume 1. The section titled "Soil Interpretations" includes soil capability interpretations for common agricultural field crops, soil erosion interpretations, and land suitability interpretations for common forest tree species.

(8) For detailed morphological, chemical and physical descriptions of typical soils, as well as tables of engineering test data, users are referred to Volume 2.

When using the soil maps and report it is important to have an understanding of the following:

(1) All soils, including those in this survey, exhibit a range of properties and characteristics within defined areas. Therefore, the soils occurring within a map delineation and represented by a specific map unit may vary.

(2) The boundaries between map units represent the best estimate of where the soils change. Since these changes at times may be gradual, some boundaries may only be approximately located.

(3) Within any delineation on the maps, inclusions of unidentified soil components may be present which are not accounted for in the map unit. These unidentified soil components, which could be as large as 10 hectares in area, are unavoidable due to the map scale and the nature of the soil mapping.

(4) Most soil information is based on the examination of soil characteristics to a depth of about 100 cm below the surface.

Section A — Analytical Methods

Most of the laboratory methods used for soil analysis are outlined in the publication "Manual on Soil Sampling and Methods of Analysis" (1), prepared by the Canada Soil Survey Committee. Soil analyses and the appropriate section numbers in that manual, indicated in parentheses, are as follows: particle size analysis by pipette method, after pretreatment with hydrogen peroxide and calgon (2.11); pH $CaCl_2$ (3.11); pH water (3.13); organic carbon by wet oxidation, using ortho-phenanthroline-ferrous sulphate as indicator (3.613); calcium carbonate equivalent, using 6N HCl and some glassware modifications (3.41); calcite-dolomite ratio was determined by gasometric procedure using the Chittick apparatus (see reference 2); cation exchange capacity (3.34); exchangeable P (4.42); exchangeable Na, Ca, Mg, and K (4.51); Fe, Al, and Mn extract by oxalate (3.52), and pyrophosphate (3.53); electrical conductivity (4.12); bulk density by core method (2.21); saturated hydraulic conductivity (see reference 3); water retention by pressure-plate extraction (2.43); shrinkage was determined by a modification of (2.13) that used the COLE rod method (see reference 4).

Engineering test data was determined for some of the commonly occurring soils in the region. These are provided in Tables 1 and 2. All of the analytical data was determined by using ASTM methods (5). Most of the analyses were carried out by the Soil and Aggregates Section Lab., Highway Engineering Division, Ontario Ministry of Transportation and Communications, Toronto. The test procedures and their ASTM numbers are as follows:

Unified classification	—D2487-69
AASHO classification	—D3282-73
Atterberg limits	—D423-4-72
Grain size analysis	—D422-72
California Bearing Ratio (CBR)	—C1883-73
Maximum dry density and percent optimum moisture	—D698-70

Section B — Detailed Soil Descriptions and Analyses

Detailed morphological, physical and chemical descriptions of typical soils occurring in the Region are presented in this section. Only the more commonly occurring soils were described and sampled to this detail and are presented here. Less detailed information for individual soils not included in this section can be obtained from the general soil association descriptions provided in Volume 1.

Not all of the analyses indicated in Section A were routinely carried out on the soils described herein. Rather, basic analyses consisting of particle size, pH ($CaCl_2$), organic matter content, and calcium carbonate equivalent were carried out for most soils. Additional physical and chemical analyses were selectively carried out on those soils considered to be highly representative of the soils composing the association in which they occur.

ALL ONTARIO 1976 PROFILE NO. 466

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVE 476 999

LANDFORM AND PARENT MATERIALS Nearly level marine clay plain, overlain by 40 to 100 cm of sandy marine or fluvial material

SITE Hay field

ELEVATION 90 m

SURFACE FEATURES simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy over clayey, neutral, mild, subaquic

STATUS Modal

Morphological Description, ALLENDALE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-21 (21-30)	10YR 2/1.5 m	FSL			very friable, nonplastic	
Bmgj	21-48 (19-27)	10YR 6/3 m	FS			very friable, nonplastic	common, coarse, prominent, 10YR 4/6
II Cg	48-61 (9-13)	10YR 5/2 m	L			friable, plastic	many, coarse, prominent, 10YR 4/6
III Cg	61+	10YR 5/1 m	SIC			friable, very plastic	common, fine, prominent, 10YR 6/6

Physical and Chemical Analyses, ALLENDALE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm³	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-21	0	2	8	25	26	13	74	18	8									
Bmgj	21-48	0	0	2	11	54	23	90	7	3									
II Cg	48-61	0	2	11	15	11	7	47	28	25									
III Cg	61+	0						5	49	46									

Physical and Chemical Analyses, ALLENDALE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-21	6.3	6.0	5.2	0.0				7.5	2.0	0.2	0.1	0.3	0.2	0.0	0.3	0.2	
Bmgj	21-48	6.7	6.3	0.3	1.9				2.5	0.9	0.1	0.1	0.3	0.1	0.0	0.1	0.0	
II Cg	48-61	6.8	6.3	0.7	0.0				9.0	4.9	0.3	0.1	0.6	0.2	0.0	0.0	0.0	
III Cg	61+	6.9	6.5	0.4	0.0				12.3	7.2	0.5	0.1	0.5	0.2	0.0	0.0	0.0	

ANSTRUTHER SERIES, Anstruther Association

AUH ONTARIO 1981 PROFILE NO. 2733

LOCATION West Carleton Tp. Mun., NIS Map Area 31F/8, 18 TVF 168 269

LANDFORM AND PARENT MATERIALS Hummocky rockland consisting of precambrian rock outcrops and areas with a thin veneer of stony, sandy undifferentiated material overlying precambrian bedrock

SITE Forested

ELEVATION 107 m

SURFACE FEATURES 6% complex slope, very stony, very rocky

DRAINAGE Rapidly drained

CLASSIFICATION Orthic Eutric Brunisol, sandy, very shallow lithic, mild, subhumid

STATUS Taxadjunct, Ah less than 10 cm thick; usually classed as Orthic Sombric Brunisol

Morphological Description, ANSTRUTHER SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-9	10YR 2/1 m	LCS				
Bm	9-25	7.5YR 3/4 m	LCS				
R	25+						

Physical and Chemical Analyses, ANSTRUTHER SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-9	11	3	15	20	25	17	77	14	8									
Bm	9-25	13	8	12	22	23	13	81	16	3									
R	25+																		

Physical and Chemical Analyses, ANSTRUTHER SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-9		5.1	10.0												0.2	0.1	
Bm	9-25		5.6	3.2												0.2	0.1	
R	25+																	

BIV ONTARIO 1980 PROFILE NO. 1125

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 069 383

LANDFORM AND PARENT MATERIALS Nearly level marine plain, with 40 to 100 cm of medium textured material over moderately fine to fine textured material

SITE Cultivated forage field

ELEVATION 111 m

SURFACE FEATURES 1% complex slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, coarse loamy over clayey, neutral, mild subaquic

STATUS Modal

Morphological Description, BAINSVILLE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-22 (20-27)	10YR 2/1.5 m	L	weak to moderate, coarse, platy	weak to moderate, medium, subangular blocky	sl. sticky, friable, nonplastic	
Bg1	22-37 (14-20)	2.5YR 5/2 m	VFSL	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	sl. sticky, very friable, nonplastic	common, fine, prominent, 7.5YR 5/8
Bg2	37-49 (10-18)	2.5YR 4/2 m	L	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	sl. sticky, very friable, nonplastic	many, medium, prominent, 7.5YR 4/6
II Cg	49-100	10YR 4.5/1 m	SIC	moderate, coarse, platy	strong, coarse, subangular blocky	sticky, firm, very plastic	common, fine, prominent, 10YR 4/6

BAINSVILLE SERIES, Castor Association

Physical and Chemical Analyses, BAINSVILLE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-22	0	0	0	1	4	39	44	44	12	5	1.29		40.9	38.2		21.3	2.5	0.3
Bg1	22-37	0	0	0	0	4	60	64	34	2	1	1.49		34.5	28.0		3.3	1.2	0.1
Bg2	37-49	0	0	0	2	3	35	40	45	15	4	1.53		32.9	25.9		6.5	3.8	0.1
II Cg	49-100							8	44	48	7	1.47		33.7	29.9		19.4		0.1

Physical and Chemical Analyses, BAINSVILLE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-22	6.6	6.4	5.5	0.4		29.6	0.3	17.5	0.7	0.1	4.0				0.1	0.1	0.0
Bg1	22-37	7.1	6.5	0.3	0.2		5.4	0.2	7.5	0.3	0.0	2.0						
Bg2	37-49	7.2	6.7	0.1	0.2		12.9	0.2	11.3	0.7	0.2	2.0						
II Cg	49-100	7.3	6.8	0.3	0.3		42.4	0.3	22.3	2.4	0.5	2.0						

BEARBROOK SERIES, Bearbrook Association

BBO ONTARIO 1979 PROFILE NO. 1931

LOCATION Cumberland Tp., NTS Map Area 31C/6, 18 TVF 754 330

LANDFORM AND PARENT MATERIALS Nearly level marine clay plain, with sediments having mainly heavy clay textures

SITE Cultivated forage field, tile drained

ELEVATION 83 m

SURFACE FEATURES .5% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, very fine clayey, alkaline, weakly calcareous, mild subaquic

STATUS Taxadjunct; usually neutral and noncalcareous

Morphological Description, BEARBROOK SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-16 (15-19)	5Y 2.5/2 d	SIC	mod. to strong, med. to coarse, subangular blocky	mod. to strong, med., subangular blocky	sticky, firm, hard, plastic	
Bg1	16-31 (11-16)	10YR 6/2 m and 2.5YR 5/4 m	HC	mod. to str. med. to coarse, subangular blocky	mod. to str., med., subangular blocky	sticky, firm, plastic	prominent, 2.5YR 4/6
Bg2	31-48 (15-21)	5Y 5/2 m	SIC	mod. to str., coarse, subangular blocky	mod. to str., med. to coarse, granular	sticky, firm, plastic	prominent, 7.5YR 5/6
Bg3	48-55 (6-7)	5Y 5/2 m	C	mod. to str., coarse, subangular blocky	mod. to str., fine to med., subangular blocky	sticky, frim, plastic	prominent, 10YR 4/6
BCg	55-80 (24-30)	2.5YR 5/4 m and 10YR 6.5/1 m	HC	str., coarse, subangular blocky	str., med., subangular blocky	sticky, friable, plastic	faint, 2.5YR 5/4
Ckg	80+	7.5YR 5/4 m and 5Y 5/2 m	HC	massive		sticky, very firm, plastic	prominent, 7.5Y 5/8

Physical and Chemical Analyses, BEARBROOK SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-16							9	43	49	16	1.07	49	54.8	41.9	36.9	31.3	77.3	0.2
Bg1	16-31							2	33	65	18	1.39	46	38.4	35.6	33.0	27.7	0.4	0.2
Bg2	31-48							2	47	52	14	1.39	46	41.8	35.6	31.7	25.9	0.5	0.1
Bg3	48-55							4	43	53	15	1.41	45	39.5	34.4	30.3	23.6	0.5	0.2
BCg	55-80							3	17	80	25	1.24	50	56.4	48.3	42.1	35.7	0.6	0.2
Ckg	80+							4	23	73	14	1.26	48	50.5	44.7	38.9	30.1	0.2	0.2

Physical and Chemical Analyses, BEARBROOK SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-16	6.6	6.4	7.7	3.1		94.0	0.5	22.0	2.9	0.2	4.0	0.5	0.4	0.0	0.1	0.2	
Bg1	16-31	7.4	7.2	0.3	0.0		69.0	0.8	21.0	4.4	0.4	2.0	0.4	0.3	0.0	0.0	0.0	
Bg2	31-48	7.6	7.2	0.3	0.0		59.0	1.0	18.0	4.5	0.3	2.0	0.3	0.2	0.0	0.0	0.0	
Bg3	48-55	7.7	7.3	0.3	0.7		60.5	1.0	15.5	4.8	0.4	1.0	0.3	0.2	0.0	0.0	0.0	
BCg	55-80	7.9	7.6	0.1	0.5		75.0	1.3	17.0	13.3	0.7	1.0	0.3	0.2	0.0	0.0	0.0	
Ckg	80+	8.1	7.8	0.3	5.7	2.5	62.0	1.2	23.0	12.7	0.9	1.0	0.2	0.2	0.0	0.0	0.0	

BKK ONTARIO 1977 PROFILE NO. 1340

LOCATION Kemptville College, NTS Map Area 31G/4 18 TVE 503 838

LANDFORM AND PARENT MATERIALS Nearly level marine clay plain, overlain by 40 to 100 cm of sandy marine or fluvial material

SITE Cultivated field

ELEVATION 90 m

SURFACE FEATURES 1% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, sandy over clayey, neutral, mild perhumid

STATUS Modal

Morphological Description, BECKETTS CREEK SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-25 (23-26)	10YR 3/2 m	LS	weak to moderate, medium to coarse, subangular blocky	moderate, fine to medium, granular	very friable	
Bm	25-34 (8-10)	10YR 3/6 m	FS	weak to moderate, very coarse, subangular blocky	moderate, fine to medium, granular	very friable	
C	34-43 (7-10)	10YR 4/4 m	FS	weak to moderate, very coarse, subangular blocky	moderate, fine to medium, granular	friable	
II Cgj	43-50 (6-8)	10YR 3/3 m	S	weak to moderate, fine to medium, subangular blocky	weak to moderate, medium, granular	friable	common, medium, distinct, 7.5YR 3/4
III Cg	50+	5Y 6/2 m	C	moderate to strong, medium to coarse, subangular blocky	moderate to strong, fine, subangular blocky	firm	common, medium, prominent, 7.5YR 3/4

Physical and Chemical Analyses, BECKETTS CREEK SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-25	0	0	5	23	41	16	85	10	5									
Bm	25-34	0	0	3	14	52	26	95	4	1									
C	34-43	0	0	2	14	53	26	95	5	0									
II Cgj	43-50	10	2	10	32	40	8	92	8	0									
III Cg	50+	0	0	2	5	6	3	16	36	48									

Physical and Chemical Analyses, BECKETTS CREEK SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-25	7.0	6.5	2.9	0.6		25.6		18.5	3.3	0.6	31.0	0.5	0.4	0.0	0.0	0.1	
Bm	25-34	6.6	6.2	1.3	0.5		16.4		6.5	0.8	0.3	5.0	0.4	0.5	0.0	0.0	0.1	
C	34-43	6.5	6.2	0.7	0.4				2.0	0.6	0.3	4.0	0.2	0.3	0.0	0.0	0.1	
II Cgj	43-50	6.5	6.0	0.9	0.3		20.5		3.0	1.0	0.4	3.0	0.4	0.4	0.0	0.0	0.1	
III Cg	50+	6.7	6.5	0.4	0.3				12.3	5.2	0.4	5.0	0.6	0.3	0.0	0.0	0.0	

BDO ONTARIO 1979 PROFILE NO. 2125

LOCATION Osgoode Tp., NTS Map Area 31G/4, 18 TVF 604 983

LANDFORM AND PARENT MATERIALS Level marine clay plain, with sediments having mainly silty clay or clay textures

SITE Cultivated hay field

ELEVATION 80 m

SURFACE FEATURES .5% complex slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, fine clayey, mixed clay, neutral, mild subaquic

STATUS Modal

Morphological Description, BRANDON SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-20 (19-21)	10YR 3/2 m	CL	moderate, medium, subangular blocky	moderate, medium, granular	sl. sticky, friable, very plastic	few, fine, faint
Bg1	20-31 (10-12)	10YR 5/1 m	SIC	weak to moderate, medium, subangular blocky	moderate to strong, medium to coarse, granular	sticky, firm, very plastic	common, fine, prominent, 10YR 4/4
Bg2	31-55 (23-24)	10YR 4/1 m	C	weak, medium to coarse prismatic	moderate to strong, medium, subangular blocky	sticky, firm, very plastic	common, medium, prominent, 10YR 4/4
Cg1	55-67 (11-12)	10YR 5/1 m	SIC	moderate to strong, coarse, subangular blocky	strong, medium to coarse, subangular blocky	sticky, firm, very plastic	common, medium, prominent, 10YR 6/6
Cg2	67+	5Y 5/1 m	C	weak to moderate, fine, prismatic	strong, medium to coarse, subangular blocky	sticky, firm, very plastic	common, medium, prominent, 10YR 4/4

Physical and Chemical Analyses, BRANDON SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % vCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-20	0	1	1	2	7	19	30	38	32	13	1.28	48	41.8	29.1	24.2	19.2	21.0	0.2
Bg1	20-31	0	1	1	2	7	9	20	40	40	12	1.51	38	31.2	26.1	21.7	17.4	2.5	0.1
Bg2	31-55	0	18	2	1	1	1	22	35	43	8	1.44	41	39.5	32.5	27.9	22.8	8.3	0.1
Cg1	55-67							6	40	55		1.47	41	37.1	32.4	28.9	24.4	5.9	0.1
Cg2	67+							11	36	53		1.44	60	39.5	34.6	31.1	26.5	2.1	0.1

Physical and Chemical Analyses, BRANDON SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-20	7.2	6.6	3.6	0.5		51.0	0.6	10.5	13.3	0.3	3.0	0.6	0.1		0.1		
Bg1	20-31	7.4	7.1	0.9	0.3		53.0	0.7	11.5	16.5	0.4	1.0	0.4	0.2	0.1			
Bg2	31-55	7.6	7.3	0.4	0.4		53.0	1.0	11.5	17.6	0.5	1.0	0.3	0.2	0.1			
Cg1	55-67	7.8	7.0	0.4	0.9		54.0	1.0	11.0	17.6	0.7	2.0	0.2	0.2				
Cg2	67+	7.9	7.0	0.3	0.7		52.0	0.8	10.5	14.9	0.7	3.0	0.2	0.2				

BOK ONTARIO 1982 PROFILE NO. 3502

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVE 372 835

LANDFORM AND PARENT MATERIALS Level, thin veneer of stony undifferentiated material overlying limestone or dolomite bedrock, with sediments having medium to moderately coarse textures

SITE Woodland

ELEVATION 108 m

SURFACE FEATURES 0.5% simple slope, slightly stony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, coarse-loamy, mixed nonclay, neutral, extremely calcareous, mild subaquic

STATUS Modal

Morphological Description, BROOKE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ahk	0-18 (15-19)	10YR 4/3 m	L	weak, fine, granular	weak, very fine, granular	very friable, sl. plastic	
Bmkgj	18-23 (4-7)	10YR 3/4 m	VFSL	weak, fine to medium, granular	weak, fine, granular	very friable, sl. plastic	many, fine, distinct, 2.5Y 4/4
Ckg	23-28 (3-7)	5Y 4/3 m	LFS	weak, fine to medium, granular	weak, fine, granular	nonsticky, nonplastic	many, medium, prominent, 10YR 4/6
R	28+						

Physical and Chemical Analyses, BROOKE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ahk	0-18	1	0	2	5	14	25	47	40	13									
Bmkgj	18-23	5	1	4	7	20	27	58	34	8									
Ckg	23-28	5	2	6	13	32	28	80	16	4									

Physical and Chemical Analyses, BROOKE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ahk	0-18		7.2	3.9	14.6		21.0											
Bmkgj	18-23		7.3	1.9	26.1													
Ckg	23-28		7.4	0.5	45.3	0.1												

BUCKHAM BAY SERIES, Ottawa Association

BKB ONTARIO 1981 PROFILE NO. 2485

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 149 386

LANDFORM AND PARENT MATERIALS Very gently undulating to hummocky fluvial and/or eolian sand plain, with sediments having medium sand textures

SITE Productive woodland

ELEVATION 68 m

SURFACE FEATURES 5% simple slope, nonstony, nonrocky

DRAINAGE Rapidly drained

CLASSIFICATION Orthic Dystric Brunisol, sandy, mixed nonclay, acid, mild subhumid

STATUS Modal

Morphological Description, BUCKHAM BAY SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
LFH	3-0	10YR 2/2 d	Organic				
Ah	0-8	10YR 3/2 d	S	single grain	loose, nonplastic		
Bm	8-40	10YR 4/3 d	S	single grain	loose, nonplastic		
C	40+	10YR 6/4 d	S	single grain	loose, nonplastic		

Physical and Chemical Analyses, BUCKHAM BAY SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
LFH	3-0																		
Ah	0-8	0	0	6	64	23	2	95	2	2									
Bm	8-40	0	0	3	75	22	1	99	1	0									
C	40+	0	1	3	75	21	1	99	0	0									

Physical and Chemical Analyses, BUCKHAM BAY SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
LFH	3-0																	
Ah	0-8		3.6	7.3												0.1	0.1	
Bm	8-40		4.4	1.0												0.0	0.1	
C	40+		4.8	0.3												0.0	0.0	

CRP ONTARIO 1979 PROFILE NO. 7927

LOCATION	West Carleton Tp., NTS Map Area 31F/8, 18 TVF 097 242
LANDFORM AND PARENT MATERIALS	Nearly level marine clay plain, with sediments having mainly silty clay loam textures
SITE	Cultivated hay field
ELEVATION	105 m
SURFACE FEATURES	nonstony, nonrocky
DRAINAGE	Imperfectly drained
CLASSIFICATION	Gleyed Melanic Brunisol, fine silty, neutral, mild perhumid
STATUS	Modal

Morphological Description, CARP SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-28	10YR 2.5/2 m	L	moderate to strong, subangular blocky		friable	
Bmgj1	28-43	2.5Y 4/2 m	CL	moderate, fine, subangular blocky		friable	few, fine, distinct, 2.5Y 5/4
Bmgj2	43-70	5Y 4/2 m	SICL	moderate, fine to medium, subangular blocky		friable	common, fine, distinct, 5Y 5/4
CBg	70-95	5Y 4/2 m	SICL	weak to moderate, medium to coarse, subangular blocky	moderate, fine to medium, subangular blocky	firm	common, fine, prominent, 2.5Y 5/6
Cg	95-115	5Y 4.5/2 m	SICL	weak, coarse, platy	weak to moderate, medium, subangular blocky	firm	common, fine, prominent, 2.5Y 5/6

Physical and Chemical Analyses, CARP SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-28	0	0	1	1	4	22	28	46	26	5								
Bmgj1	28-43	0	0	0	0	2	19	21	48	31	7								
Bmgj2	43-70	0	0	0	0	2	18	20	49	31	8								
CBg	70-95	0	0	0	0	0	17	17	50	33	9								
Cg	95-115	0	0	0	0	1	17	18	48	34	9								

Physical and Chemical Analyses, CARP SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-28		5.8	6.1			22.5		19.5	2.5	0.5		0.7	0.1				
Bmgj1	28-43		6.3	1.1			15.9		12.9	2.5	0.5		0.6	0.1				
Bmgj2	43-70		6.6	0.5			14.7		11.5	2.6	0.5		0.6	0.1				
CBg	70-95		6.8	0.5			14.9		11.7	2.7	0.5		0.6	0.1				
Cg	95-115		6.9	0.3			15.2		11.8	2.8	0.6		0.7	0.1				

CASTOR SERIES, Castor Association

CST ONTARIO 1982 PROFILE NO. 3536

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 045 296

LANDFORM AND PARENT MATERIALS Very gently sloping marine plain, with 40 to 100 cm of medium textured material over moderately fine to fine textured material

SITE Cultivated field

ELEVATION 102 m

SURFACE FEATURES 3.5% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, coarse loamy over clayey, mixed nonclay and mixed clay, neutral, mild, perhumid

STATUS Modal; Cg horizon not always present

Morphological Description, CASTOR SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-19 (15-23)	10YR 3/2 m	SIL	wk. to mod., fine to med., granular	wk. to mod., fine, granular	very friable, sl. plastic	
Bm	19-48 (16-29)	10YR 5/6 m	SI	wk., med., subangular blocky	wk., fine to med., granular	very friable, sl. plastic	
Bmgj	48-79 (13-44)	2.5Y 5/4 m	SIL	wk., med., subangular blocky	wk. fine to med., subangular blocky	very friable, sl. plastic	common, coarse, prominent, 10YR 5/8
Cg	79-87 (7-10)	2.5Y 4/2 m	FSL	wk., med. to coarse, subangular blocky	wk., fine to med., subangular blocky	very friable, sl. plastic	common, medium, prominent, 10YR 5/8
II Cg1	87-120	2.5Y 4/2 m	CL	mod. to str., med., subangular blocky	mod. to str., fine to med., subangular blocky	very firm, plastic	common, fine, prominent, 7.5YR 4/4
II Cg2	120+	2.5Y 4/2 m	C	mod. to str., med., subangular blocky	mod. to str., fine to med., subangular blocky	very firm, plastic	few, fine, prominent, 7.5YR 4/4

Physical and Chemical Analyses, CASTOR SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-19	1	1	3	4	5	12	25	61	15									
Bm	19-48	0	0	1	2	3	7	14	83	4									
Bmgj	48-79	0	3	5	8	9	8	34	63	3									
Cg	79-87	0	1	3	11	20	24	58	35	7									
II Cg1	87-120	0	0	4	13	10	4	32	32	36°									
II Cg2	120+							9	36	55									

Physical and Chemical Analyses, CASTOR SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-19		7.0	7.2	0.3		26.0											
Bm	19-48		5.6	1.9														
Bmgj	48-79		5.7	0.8														
Cg	79-87		5.6															
II Cg1	87-120		5.9															
II Cg2	120+		6.2															

CTB ONTARIO 1980 PROFILE NO. 3108

LOCATION City of Kanata, NTS Map Area 31F/8, 18 TVF 212 308

LANDFORM AND PARENT MATERIALS Gently undulating marine or fluvial sand plain, with sediments having mainly coarse sand textures

SITE Productive woodland

ELEVATION 68 m

SURFACE FEATURES 7% complex slope, nonstony, nonrocky

DRAINAGE Rapidly drained

CLASSIFICATION Eluviated Dystric Brunisol, sandy, mixed nonclay, acid, mild subhumid

STATUS Taxadjunct; Aej horizon usually absent

Morphological Description, CONSTANCE BAY SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-8 (5-12)	5YR 2.5/1 m	CS	weak, fine to medium, subangular blocky	weak, fine to medium, granular	nonsticky, loose, nonplastic	
Aej	8-10 (0-6)	5YR 5.5/3 m	CS	very weak, medium, subangular blocky	single grain	nonsticky, loose, nonplastic	
Bm	10-24 (11-23)	7.5YR 4/6 m	CS	very weak, medium, subangular blocky	single grain	nonsticky, loose, nonplastic	
BC	24-60 (28-37)	10YR 4/6 m	CS	very weak, medium, subangular blocky	single grain	nonsticky, loose, nonplastic	
C	60+	10YR 6/6 m	CS	single grain		nonsticky, loose, nonplastic	

Physical and Chemical Analyses, CONSTANCE BAY SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-8	0	5	40	23	1	4	90	7	3									
Aej	8-10																		
Bm	10-24	0	3	44	26	21	2	96	3	1									
BC	24-60	0	4	47	25	20	2	98	2	0									
C	60+	0	6	45	21	27	2	99	1	0									

Physical and Chemical Analyses, CONSTANCE BAY SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-8	7.1	6.7	12.5	0.3		25.2		13.8	1.7	0.2	1.3				0.1	0.1	0.0
Aej	8-10																	
Bm	10-24	5.8	5.2	1.1	4.7				2.0	0.4	0.2	2.2				0.1	0.1	0.0
BC	24-60	5.6	5.1	0.4	1.1				1.0	0.1	0.1	0.9				0.0	0.1	0.0
C	60+	5.4	4.8	0.1	0.0				1.0	0.1	0.0	0.4				0.0	0.1	0.0

DHU ONTARIO 1980 PROFILE NO. 3139

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 138 245

LANDFORM AND PARENT MATERIALS Very gently sloping marine plain, with sediments mainly having silty clay or clay textures

SITE Cultivated grain field

ELEVATION 90 m

SURFACE FEATURES 2.5% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, fine clayey, neutral, weakly calcareous, mild perhumid

STATUS Modal

Morphological Description, DALHOUSIE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-14 (13-15)	10YR 3/2 m	SICL	moderate, medium, subangular blocky	moderate, medium to coarse, granular	sl. sticky, very friable, very plastic	
Bmgj	14-46 (30-34)	5Y 4/3 m	SICL	moderate to strong, coarse, subangular blocky	moderate to strong, fine to medium, subangular blocky	sticky, friable, very plastic	few, fine, faint, 5Y 4/3
Cgj	46-110	2.5Y 4/2 m	SIC	moderate to strong, medium, subangular blocky	strong, fine to medium, subangular blocky	sticky, firm, very plastic	common, medium, distinct, 10YR 4/3
Cg	110+	2.5Y 5/1 m	SIC			sticky, firm, very plastic	many, medium, prominent, 10YR 5/6

Physical and Chemical Analyses, DALHOUSIE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-14	1	2	1	2	2	7	14	57	29	9								
Bmgj	14-46	0	1	1	3	5	8	18	47	35	13								
Cgj	46-110	0	0	0	2	4	7	13	43	44	12								
Cg	110+							7	47	46									

Physical and Chemical Analyses, DALHOUSIE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-14	7.2	6.8	3.7	0.6													
Bmgj	14-46	6.5	6.1	1.0	0.5													
Cgj	46-110	6.8	6.3	0.1	1.1													
Cg	110+	7.3	6.9	0.2	1.3													

DUNROBIN SERIES, Mille Isle Association

DNR ONTARIO 1981 PROFILE NO. 2523

LOCATION Osgoode Tp., NTS Map Area 31G/4, 18 TVF 536 046

LANDFORM AND PARENT MATERIALS Nearly level marine or fluvial sand plain, with sediments consisting mainly of coarse sand

SITE Sod farm

ELEVATION 90 m

SURFACE FEATURES 1% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy, mixed nonclay, neutral, mild subaquic

STATUS Modal

Morphological Description, DUNROBIN SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-28	5YR 2.5/2 m	LCS	single grain		loose, nonplastic	
Bmgj	28-48	7.5YR 3/4 m	CS	single grain		loose, nonplastic	few, medium, distinct, 5YR 4/4
Bg	48-80	10YR 4/2 m	CS	single grain		loose, nonplastic	common, medium, prominent, 5YR 4/4
Cg	80+	10YR 5/2 m	CS	single grain		loose, nonplastic	common, medium, prominent, 5YR 4/4

Physical and Chemical Analyses, DUNROBIN SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-28	10	20	40	21	4	2	87	9	4									
Bmgj	28-48	12	15	44	26	5	2	91	6	2									
Bg	48-80	6	27	34	20	5	2	89	8	3									
Cg	80+	4	18	50	21	4	1	95	4	1									

Physical and Chemical Analyses, DUNROBIN SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-28		5.0	9.7														
Bmgj	28-48		5.0	1.3														
Bg	48-80		5.1	0.2														
Cg	80+		6.3	0.2														

DWH ONTARIO 1980 PROFILE NO. 3135

LOCATION Goulbourn Tp., NTS Map Area 31G/4, 18 TVE 240 978

LANDFORM AND PARENT MATERIALS Nearly level, stony glacial till plain, overlain by 40 to 100 cm of sandy marine material

SITE Hay field

ELEVATION 114 m

SURFACE FEATURES 2% simple slope, slightly stony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy over loamy, mixed nonclay, alkaline, extremely calcareous, mild subaquic

STATUS Modal

Morphological Description, DWYER HILL SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-18 (15-19)	10YR 2/1 m	FS	single grain		very friable, nonplastic	
Bmgj	18-31 (10-14)	10YR 4/4 m	FS	single grain		very friable, nonplastic	common, medium, prominent, 5YR 5/8
Cg	31-52 (15-24)	2.5Y 6/3 m	FS	single grain		very friable, nonplastic	many, coarse, prominent, 5YR 5/8
II Ckg	52+	5Y 6/1 m	GL	very weak, fine to medium, subangular blocky	very weak, fine, subangular blocky	firm, slightly plastic	many, coarse, prominent, 10YR 6/8

DWYER HILL SERIES, Ironside Association

Physical and Chemical Analyses, DWYER HILL SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-18	2	0	2	14	60	10	86	8	6	3	1.21		43.6	34.9		9.3	8.8	0.2
Bmgj	18-31	5	1	3	16	63	9	92	7	1	0	1.00		62.7	52.3		19.4	21.1	0.1
Cg	31-52	3	1	2	12	66	13	94	5	1	1	1.40		36.5	26.3		4.1	11.0	0.1
II Ckg	52+	25	4	5	8	13	12	42	36	22	6								0.2

Physical and Chemical Analyses, DWYER HILL SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-18	6.2	5.7	4.4	0.3		27.0	0.3	13.8	1.0	0.2	5.0				0.2	0.3	
Bmgj	18-31	7.1	6.5	1.7	0.0		22.1	0.3	11.3	0.9	0.0	3.0				0.2	0.2	
Cg	31-52	7.5	6.9	0.1	0.2		9.9	0.3	7.5	0.7	0.0	3.0				0.1	0.1	
II Ckg	52+	8.0	7.6	0.1	41.0	2.9	15.7	0.2	26.3	1.6	0.1	2.0				0.0	0.0	

FRM ONTARIO 1980 PROFILE NO. 3143

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVE 375 926

LANDFORM AND PARENT MATERIALS Very gently undulating, thin veneer of stony undifferentiated material overlying limestone or dolomite bedrock, with sediments having medium to moderately coarse textures

SITE Abandoned farmland

ELEVATION 99 m

SURFACE FEATURES 2% complex slope, moderately stony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Melanic Brunisol, coarse loamy, very shallow lithic, neutral, strongly calcareous, mild humid

STATUS Modal

Morpholigical Description, FARMINGTON SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-10 (9-11)	7.5YR 3/3 m	L	weak to moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	sl. sticky, very friable, nonplastic	
Bm	10-20 (9-20)	7.5YR 4/3 m	FSL	weak to moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	sl. sticky, very friable, nonplastic	
R	20+						

FARMINGTON SERIES, Farmington Association

Physical and Chemical Analyses, FARMINGTON SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-10	6	7	11	7	9	16	50	35	15									
Bm	10-20	8	6	13	7	9	18	53	32	15									

Physical and Chemical Analyses, FARMINGTON SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-10	7.6	7.2	4.2	3.9													
Bm	10-20	7.7	7.3	3.1	7.7													

FKW ONTARIO 1982 PROFILE NO. 3505

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVE 350 906

LANDFORM AND PARENT MATERIALS Very gently sloping thin veneer of stony undifferentiated material overlying limestone or dolomite bedrock, with sediments having medium to moderately coarse textures

SITE Unproductive woodland

ELEVATION 105 m

SURFACE FEATURES 2% simple slope, moderately stony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, coarse loamy, mixed nonclay, very shallow lithic, alkaline, strongly calcareous, mild perhumid

STATUS Modal

Morphological Description, FRANKTOWN SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-11 (7-13)	10YR 3/3 m	L	weak, fine to medium, granular	weak, fine, granular	very friable, nonplastic	
Bmgj	11-21 (8-12)	10YR 3/4 m	L	weak, medium to coarse, granular	weak, fine to medium, granular	very friable, nonplastic	common, fine, distinct, 10YR 5/6
Ckgj	21-30 (6-10)	2.5Y 4/4 m	SL	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	very friable, nonplastic	common, medium, distinct, 10YR 4/6
R	30+						

Physical and Chemical Analyses, FRANKTOWN SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-11	1	1	4	16	7	10	39	38	23									
Bmgj	11-21	2	3	5	20	9	11	47	39	14									
Ckgj	21-30	3	4	12	34	9	10	71	25	4									

Physical and Chemical Analyses, FRANKTOWN SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Fe	Oxalate Al	Mn	Fe	Pyrophosphate Al	Mn
Ah	0-11		7.2	5.3	0.7		22.0											
Bmgj	11-21		7.2	2.1	1.3													
Ckgj	21-30		7.4	1.2	14.6	0.1												

FRENCH HILL SERIES, Leitrim Association

FHH ONTARIO 1977 PROFILE NO. 1337

LOCATION	Cumberland Tp., NTS Map Area 31G/6, 18 TVF 685 301
LANDFORM AND PARENT MATERIALS	Nearly level, shaly, glacial till plain
SITE	*Road cut*
ELEVATION	93 m
SURFACE FEATURES	2% simple slope, nonstony, nonrocky
DRAINAGE	Well drained
CLASSIFICATION	Orthic Melanic Brunisol, fragmental, mixed nonclay, acid, weakly calcareous, mild humid
STATUS	Modal; carbonates due to road throw

Morphological Description, FRENCH HILL SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-20	5YR 2.5/1 m	CSL	moderate, very fine to fine, granular		loose, nonplastic	
Bm	20-50	7.5YR 3/2 m	VGCSL	moderate, very fine to fine, granular		loose, nonplastic	
C	50+	5YR 2.5/2 m	VGCSL	moderate, very fine to fine, granular		loose, nonplastic	

Physical and Chemical Analyses, FRENCH HILL SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-20	11	15	14	12	8	5	54	31	15									
Bm	20-50	61	16	16	14	10	6	61	28	11									
C	50+	74	13	15	21	11	8	67	26	7									

Physical and Chemical Analyses, FRENCH HILL SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-20	8.0	7.6	4.4	1.2		40.0		19.5	2.0	0.2	11.0	1.0	0.0	0.0	0.0	0.0	
Bm	20-50	6.7	6.2	2.9	1.4		33.9		10.0	2.4	0.2	16.0	1.1	0.0	0.0	0.0	0.1	
C	50+	5.3	4.9	1.3	2.3	0.7	28.7		6.5	1.6	0.1	18.0	1.0	0.0	0.0	0.0	0.1	

GALESBURG SERIES, Queensway Association

CBC ONTARIO 1980 PROFILE NO. 3131

LOCATION City of Kanata, NTS Map Area 31G/5, 18 TVF 220 238

LANDFORM AND PARENT MATERIALS Very gently sloping ridge of glacial till material, with sediments having mainly sandy loam textures

SITE Road cut

ELEVATION 98 m

SURFACE FEATURES 3% complex slope, moderately stony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Melanic Brunisol, coarse loamy, mixed nonclay, neutral, mild humid

STATUS Modal

Morpholgical Description, GALESBURG SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-17 (12-20)	10YR 3/2 m	SL	weak, fine, granular		very friable, slightly plastic	
Bm1	17-29 (0-23)	10YR 4/6 m	FSL	weak, fine, granular		very friable, slightly plastic	
Bm2	29-75 (34-63)	10YR 3/3 m	SL	massive		friable, slightly plastic	
C	75+	5Y 4/2 m	SL	massive		friable, slightly plastic	

Physical and Chemical Analyses, GALESBURG SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-17	5	6	13	20	22	2	63	26	11	4	0.95		67.3	41.8		11.7	28.9	0.3
Bm1	17-29	7	2	9	18	23	17	69	27	4	1	1.05		65.8	36.6		22.2	7.6	0.1
Bm2	29-75	9	4	11	18	21	14	68	27	5	2	1.49		31.1	21.1		7.2	6.4	0.1
C	75+	6	4	11	19	22	15	71	22	7	5	1.61		29.4	21.1		4.9	5.4	0.1

Physical and Chemical Analyses, GALESBURG SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-17	7.4	7.0	6.9	3.0		34.8	0.2	18.8	2.4	0.1	4.0				0.3	0.2	0.0
Bm1	17-29	6.2	5.6	1.1	0.0		14.3	0.2	5.0	1.1	0.1	4.0				0.2	0.2	0.0
Bm2	29-75	6.2	5.6	0.3	0.0		12.8	0.2	5.0	1.1	0.1	7.0				0.1	0.1	0.0
C	75+	6.8	6.2	0.0	0.3		8.4	0.2	6.3	1.3	0.1	8.0				0.0	0.0	0.0

GVI ONTARIO 1980 PROFILE NO. 3125

LOCATION Goulbourn Tp., NTS Map Area 31F/1, 18 TVF 156 045

LANDFORM AND PARENT MATERIALS Very gently sloping, stony, glacial till ridge with sediments having fine sandy loam textures

SITE Road cut

ELEVATION 135 m

SURFACE FEATURES 3% simple slope, slightly stony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Gray Brown Luvisol, coarse loamy, mixed nonclay, alkaline, strongly calcareous, mild humid

STATUS Taxadjunct; usual classification is Eluviated Melanic Brunisol with Aej and Btj horizons

Morphological Description, GRENVILLE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap1	0-19 (16-22)	7.5YR 3/2 m	FSL	moderate, fine to medium, granular	moderate, fine, granular	very friable, sl. plastic	
Ap2	19-35 (13-18)	10YR 3/3 m	FSL	weak to moderate, fine to medium, granular	weak to moderate, fine, granular	very friable, sl. plastic	
Ae	35-55 (18-20)	10YR 3/4 m	FSL	weak to moderate, fine to medium, granular	weak to moderate, fine, granular	very friable, sl. plastic	
Bt	55-77 (18-23)	10YR 3/3 m	FSL	moderate to strong, fine to medium, granular	moderate to strong, fine, granular	very friable, sl. plastic	
BC	77-92 (10-16)	2.5Y 4/2 m	FSL	moderate to strong, medium to coarse, subangular blocky	moderate, fine to medium, subangular blocky	friable, sl. plastic	
Ck	92+	2.5Y 5/2 m	FSL	strong, medium to coarse, subangular blocky	strong, fine to medium, subangular blocky	friable, sl. plastic	

Physical and Chemical Analyses, GRENVILLE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm³	Porosity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap1	0-19	8	3	6	14	18	18	59	30	11	8	1.13		54.2	35.7		18.6	15.7	0.3
Ap2	19-35	5	3	7	14	20	18	62	33	5	2	1.41		33.0	26.1		8.2	18.9	0.3
Ae	35-55	5	3	5	12	21	21	62	32	6	2	1.25		44.5	34.1		8.2	9.5	0.3
Bt	55-77	8	3	5	10	19	19	56	26	18	15	1.34		41.6	30.5		9.4	6.2	0.3
BC	77-92	5	2	5	12	23	20	62	27	11	8								0.2
Ck	92+	12	4	6	11	22	22	65	30	5	3								0.2

Physical and Chemical Analyses, GRENVILLE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Available P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap1	0-19	7.6	7.2	3.9	0.5		20.6	0.2	16.3	1.5	0.2	3.0				0.1		
Ap2	19-35	7.8	7.4	2.5	0.5		18.6	0.3	22.5	1.5	0.1	3.0				0.2	0.1	
Ae	35-55	7.9	7.4	0.9	0.3		12.8	0.3	12.5	0.8	0.1	4.0				0.2	0.1	
Bt	55-77	7.4	7.1	0.7	0.9		22.6	0.2	11.3	1.3	0.2	2.0				0.1		
BC	77-92	7.7	7.3	0.5	0.8		15.2	0.2	10.0	1.2	0.2	3.0						
Ck	92+	8.1	7.6		20.3	1.7	9.4	0.2	21.3	0.9	0.2	2.0						

HERBERTS CORNERS SERIES, Mille Isle Association

NBC ONTARIO 1982 PROFILE NO. 3519

LOCATION Osgoode Tp., Map Area 31G/4, 18 TVF 534 994

LANDFORM AND PARENT MATERIALS Nearly level marine or fluvial sand plain

SITE Abandoned farmland

ELEVATION 90 m

SURFACE FEATURES 2% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Sombric Brunisol, sandy, mixed nonclay, acid, mild perhumid

STATUS Modal

Morphological Description, HERBERTS CORNERS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-22 (19-24)	10YR 3/4 m	LCS	very weak, fine to medium, granular	very weak, fine, granular	very friable, nonplastic	
Bmgj1	22-50 (23-28)	10YR 4/6 m	CS	single grain		loose, nonplastic	few, medium, distinct, 7.5YR 4/6
Bmgj2	50-65 (15-17)	10YR 3/6 m	CS	single grain		loose, nonplastic	many, medium, distinct, 7.5YR 5/8
Cgj	65+	10YR 6/3 m	CS	single grain		loose, nonplastic	many, medium, prominent, 7.5YR 5/8

HERBERTS CORNERS SERIES, Mille Isle Association

Physical and Chemical Analyses, HERBERTS CORNERS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm³	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-22	5	10	32	34	6	3	85	11	4									
Bmgj1	22-50	8	11	29	44	5	2	91	7	2									
Bmgj2	50-65	1	11	38	43	3	1	96	2	2									
Cgj	65+	2	17	41	34	3	1	96	3	1									

Physical and Chemical Analyses, HERBERTS CORNERS SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-22		4.8	2.9			12.0									0.1	0.2	
Bmgj1	22-50		4.8	1.0												0.1	0.2	
Bmgj2	50-65		4.7	0.0												0.0	0.0	
Cgj	65+		4.9													0.0	0.0	

IRONSIDE SERIES, Ironside Association

IID ONTARIO 1977 PROFILE NO. 1357

LOCATION Kemptville College of Agricultural Technology, NTS Map Area 31G/4, 18 TVE 502 830

LANDFORM AND PARENT MATERIALS Nearly level stony glacial till plain, overlain by 40 to 100 cm of sandy marine material

SITE Cultivated corn field

ELEVATION 92 m

SURFACE FEATURES 1.5% simple slope, slightly stony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Melanic Brunisol, sandy over loamy, alkaline, extremely calcareous, mild humid

STATUS Modal

Morphological Description, IRONSIDE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-33 (30-35)	10YR 3/2 m	LFS	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	very friable, nonplastic	
Bm1	33-40 (5-9)	10YR 3/4 m	FS	weak to moderate, medium, subangular blocky	weak to moderate, fine to medium, subangular blocky	very friable, nonplastic	
Bm2	40-49 (7-13)	10YR 3/3 m	FSL	weak to moderate, medium, subangular blocky	weak to moderate, fine to medium, subangular blocky	very friable, nonplastic	
II Ck	49+	2.5YR 4/2 m	VGSIL	weak, coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky		

Physical and Chemical Analyses, IRONSIDE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-33	2	1	2	18	46	10	77	16	7									
Bm1	33-40	1	0	2	18	66	5	91	8	1									
Bm2	40-49	3	1	2	13	48	8	72	24	4									
II Ck	49+	59	10	7	7	7	9	40	53	7									

Physical and Chemical Analyses, IRONSIDE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-33	6.8	6.4	3.0	0.4		22.6		6.0	2.5	0.5	39.0	0.4	0.3	0.1	0.0	0.1	
Bm1	33-40	7.6	6.9	1.1	0.5				3.0	1.3	0.3	10.0	0.3	0.2	0.0	0.0	0.1	
Bm2	40-49	7.5	7.1	0.8	1.4		14.2		4.5	2.2	0.4	4.0	0.5	0.2	0.1	0.0	0.1	
II Ck	49+	8.0	7.5	0.6	54.4	0.2	12.2		5.0	2.4	0.3	1.0	0.3	0.1	0.0	0.0	0.0	

JKV ONTARIO 1976 PROFILE NO. 337

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVF 435 070

LANDFORM AND PARENT MATERIALS Nearly level marine or fluvial sand plain, with sediments having loamy fine sand textures

SITE Cultivated field

ELEVATION 90 m

SURFACE FEATURES .5 to 2% complex slope, nonstony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Melanic Brunisol, sandy, mixed nonclay, neutral, mild humid

STATUS Modal; more commonly FS below the A horizon

Morphological Description, JOCKVALE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-23 (23-25)	10YR 3/3 m	FSL	weak to moderate, fine, granular		nonsticky, very friable, nonplastic	
Bm	23-50 (27-35)	10YR 4/6 m	LFS	weak to moderate, coarse, granular	weak to moderate, fine, granular	nonsticky, very friable, nonplastic	
C	50+	10YR 4.5/4 m	LFS	weak to moderate, medium to coarse, granular	weak to moderate, fine to medium, granular	nonsticky, very friable, nonplastic	

JOCKVALE SERIES, Jockvale Association

Physical and Chemical Analyses, JOCKVALE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-23	6	1	4	13	33	19	69	21	10									
Bm	23-50	13	2	4	13	36	26	80	17	3									
C	50+	0	1	1	2	44	36	83	12	5									

Physical and Chemical Analyses, JOCKVALE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-23	7.0	6.6	2.6	0.1				7.5	2.4	1.0	75.0	0.5	0.3	0.1	0.2	0.1	
Bm	23-50	6.8	5.8	0.8	0.2				2.0	0.1	0.8	48.0	0.4	0.3	0.0	0.2	0.1	
C	50+	6.6	5.7	0.3	0.3				1.0	0.3	0.5	23.0	0.2	0.1	0.0	0.0	0.1	

KAA ONTARIO 1981 PROFILE NO. 2735

LOCATION West Carleton Tp. Mun., N. of Carp on precambrian bedrock ridge, NTS Map Area 31F/8

LANDFORM AND PARENT MATERIALS Hummocky to undulating rockland consisting of precambrian rock outcrops and areas having a thin veneer of stony, sandy undifferentiated material overlying precambriam bedrock

SITE Unproductive woodland

ELEVATION

SURFACE FEATURES 4% complex slope, very stony, very rocky

DRAINAGE Well drained

CLASSIFICATION Orthic Dystric Brunisol, sandy skeletal, mixed nonclay, very shallow lithic, acid, mild humid

STATUS Modal

Morphological Description, KANATA SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-6	10YR 2/2 m	FSL				
Bm	6-30	7.5YR 3/4 m	GS				
R	30+						

Physical and Chemical Analyses, KANATA SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-6	1	1	6	15	34	18	75	17	8									
Bm	6-30	45	2	9	23	36	19	91	8	1									
R	30+																		

Physical and Chemical Analyses, KANATA SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-6		5.6	8.3														
Bm	6-30		5.2	1.7												0.2	0.1	
R	30+																	

KRS ONTARIO 1980 PROFILE NO. 3197

LOCATION West Carleton Tp., NTS Map Area 31G/5, 18 TVF 243 149

LANDFORM AND PARENT MATERIALS Very gently undulating, cobbly, glaciofluvial ridge

SITE Perimeter of gravel pit

ELEVATION 128 m

SURFACE FEATURES 3% complex slope, slightly stony, nonrocky

DRAINAGE Rapidly drained

CLASSIFICATION Eluviated Melanic Brunisol, sandy skeletal, mixed nonclay, alkaline, strongly calcareous, mild subhumid

STATUS Modal

Morphological Description, KARS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-22 (20-28)	10YR 2/2 m	GCSL	weak, fine to medium, granular	weak to moderate, fine, granular	very friable, nonplastic	
Btj	22-30 (3-9)	7.5YR 4/6 m	GCSL	weak, fine to medium, granular	weak to moderate, fine, granular	very friable, nonplastic	
Bm	30-57 (8-32)	10YR 2/2 m	GLCS	weak, fine to medium, granular	weak to moderate, fine, granular	loose, very friable, nonplastic	
Ck	57+	10YR 4/4 m	VGCS	single grain		nonplastic	

Physical and Chemical Analyses, KARS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-22	37	15	15	21	13	7	70	24	7	4								
Btj	22-30	27	14	12	21	14	7	67	24	10	6								
Bm	30-57	40	33	24	14	7	4	82	14	4	3								
Ck	57+	80	35	29	14	7	4	89	9	2	2								

Physical and Chemical Analyses, KARS SERIES (*continued*)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-22	7.8	7.5	3.3	3.5			0.1	0.2	1.6	11.8	1.1				0.1	0.1	0.0
Btj	22-30	7.7	7.3	1.4	1.1			0.1	0.2	1.5	5.9	0.8				0.1	0.1	0.0
Bm	30-57	7.8	7.3	1.9	6.1			0.4	22.0	1.0	0.1	0.3				0.1	0.1	0.0
Ck	57+	8.0	7.5	1.1	22.1	0.5		0.3	2.4	0.6	0.1	0.0				0.0	0.0	0.0

LIMOGES SERIES, St. Thomas Association

LIM ONTARIO 1980 PROFILE NO. 2855

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 157 369

LANDFORM AND PARENT MATERIALS Gently undulating fluvial and/or eolian sand plain, with sediments having fine sand textures

SITE Productive woodland

ELEVATION 65 m

SURFACE FEATURES 4% complex slope, nonstony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Dystric Brunisol, sandy, acid, mild humid

STATUS Modal; often may have Aej and/or Bfj horizons

Morphological Description, LIMOGES SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-8 (6-9)	10YR 2/1 m	FS	single grain		loose, nonplastic	
Bm1	8-20 (11-18)	10YR 3/4 m	FS	single grain		loose, nonplastic	
Bm2	20-52 (25-35)	2.5YR 5/4 m	FS	single grain		loose, nonplastic	
C	52+	5Y 5/3 m	FS	single grain		loose, nonplastic	

Physical and Chemical Analyses, LIMOGES SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-8	1	2	2	19	57	12	93	6	2	2	1.11							0.1
Bm1	8-20	0	0	0	15	64	15	94	5	1	0	1.39							
Bm2	20-52	0	0	0	17	74	8	98	1	1	0	1.49							0.1
C	52+	0	0	0	9	84	6	99	1	0	0	1.59							

Physical and Chemical Analyses, LIMOGES SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-8	6.4	6.1	3.8	0.0													
Bm1	8-20	6.2	5.4	1.1	0.0											0.1	0.1	
Bm2	20-52		5.2	0.4	0.0											0.0	0.1	
C	52+	5.6	5.1	0.0	0.0													

LYS ONTARIO 1980 PROFILE NO. 3104

LOCATION Goulbourn Tp., NTS Map Area 31G/4, 18 TVF 272 079

LANDFORM AND PARENT MATERIALS Very gently sloping, stony glacial till ridge with sediments having sandy loam and fine sandy loam textures

SITE Hay (forage) field

ELEVATION 123 m

SURFACE FEATURES Site at lower slope position of 3% simple slope, slightly stony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, coarse loamy, mixed nonclay, alkaline, strongly calcareous, mild subaquic

STATUS Modal

Morphological Description, LYONS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap1	0-15 (13-20)	10YR 3/2 m	SL	weak to moderate, coarse, subangular blocky	moderate, medium to coarse, subangular blocky	sl. sticky, very friable, sl. plastic	
Ap2	15-23 (5-10)	10YR 3/2 m	SL	weak to moderate, coarse, subangular blocky	moderate, medium to coarse, subangular blocky	sl. sticky, very friable, sl. plastic	
Bmgj	23-35 (10-18)	2.5Y 5/4 m	SL	weak to moderate, coarse, subangular blocky	weak to moderate, medium to coarse, subangular blocky	sl. sticky, very friable, sl. plastic	common, medium, prominent, 7.5YR 5/8
Ckg	35+	2.5Y 6/2 m	FSL	moderate, fine to medium, subangular blocky	moderate to strong, fine, subangular blocky	sl. sticky, friable, sl. plastic	common, medium, prominent, 2.5Y 5/6

Physical and Chemical Analyses, LYONS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm³	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap1	0-15	3	3	13	28	16	9	70	20	11									
Ap2	15-23	9	4	14	30	16	8	72	22	6									
Bmgj	23-35	5	4	14	29	17	11	73	20.	7									
Ckg	35+	14	4	7	13	19	16	59	34	8									

Physical and Chemical Analyses, LYONS SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap1	0-15	7.5	7.1	3.9	0.4		22.8		18.0	0.7	0.1					0.1		
Ap2	15-23	7.7	7.3	2.2	0.9				15.5	0.6	0.1							
Bmgj	23-35	8.0	7.5	0.6	1.8				19.0	0.6	0.1							
Ckg	35+	8.1	7.6	0.2	23.2	4.1			27.0	0.7	0.1							

MACDONALD SERIES, Chateauguay Association

MDL ONTARIO 1982 PROFILE NO. 3514

LOCATION Osgoode Tp., NTS Map Area 31G/3, 18 TVF 665 050

LANDFORM AND PARENT MATERIALS Nearly level marine veneer overlying morainal materials, with 40 to 100 cm of moderately fine to medium textured material over stony, medium to moderately coarse textured material

SITE Road cut

ELEVATION 75 m

SURFACE FEATURES 1% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, coarse loamy, mixed nonclay, alkaline, strongly calcareous, mild subaquic

STATUS Modal; SICL or CL material near surface often is deeper

Morphological Description, MACDONALD SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-12 (7-15)	10YR 3/2 m	SIL	weak to moderate, fine to medium, granular	weak to moderate, fine, granular	very friable, sl. plastic	
Bmgj1	12-20 (6-14)	10YR 3/3 m	SICL	weak to moderate, fine, granular		friable, plastic	common, fine, distinct, 10YR 4/6
Bmgj2	20-37 (16-20)	2.5Y 4/2 m	SCL	moderate to strong, medium, subangular blocky	moderate to strong, fine to medium, subangular blocky	firm, plastic	common, medium, prominent, 10YR 4/4
Cg	37-57 (6-20)	2.5Y 4/2 m	SCL	moderate to strong, medium to coarse, subangular blocky	moderate to strong, fine to medium, subangular blocky	firm, plastic	prominent, 10YR 5/6
II Ckg	57+	10YR 5/3 m	GCSL	weak, medium, subangular blocky	weak to moderate, fine to medium, subangular blocky	firm, nonplastic	prominent, 10YR 5/8

Physical and Chemical Analyses, MACDONALD SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-12	0	0	1	2	3	4	11	68	21									
Bmgj1	12-20	0	1	4	4	5	2	16	56	28									
Bmgj2	20-37	0	1	7	33	19	4	64	15	21									
Cg	37-57	0	3	11	19	13	4	49	26	25									
II Ckg	57+	38	24	13	9	10	10	67	29	4									

Physical and Chemical Analyses, MACDONALD SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ah	0-12		7.2	5.5	1.4		29.0											
Bmgj1	12-20		7.2	1.6	0.2													
Bmgj2	20-37		7.2	0.9	0.2													
Cg	37-57		7.3		0.3													
II Ckg	57+		7.7		31.1	0.4												

MARCHHURST SERIES, Nepean Association

MHH ONTARIO 1980 PROFILE NO. 3187

LOCATION City of Kanata, NTS Map Area 31G/5, 18 TVF 234 235

LANDFORM AND PARENT MATERIALS Very gently sloping sandstone bedrock plain, overlain by a 10 to 50 cm thick veneer of medium to coarse textured material

SITE Productive woodland

ELEVATION 95 m

SURFACE FEATURES 3% simple slope, very stony, very rocky

DRAINAGE Well drained

CLASSIFICATION Orthic Sombric Brunisol, coarse loamy, mixed nonclay, very shallow lithic, neutral, mild humid

STATUS Modal

Morphological Description, MARCHHURST SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-10	7.5YR 3/2 m	L	weak, medium, granular	weak, fine, granular	nonsticky, very friable, nonplastic	
Bfj	10-15	7.5YR 4/6 m	FSL	weak, medium, subangular blocky	weak, fine to medium, subangular blocky	nonsticky, very friable, nonplastic	
BC	15-43	10YR 5/6 m	GFSL	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	nonsticky, very friable, nonplastic	
R	43+						

Physical and Chemical Analyses, MARCHHURST SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-10	3	3	5	9	9	16	42	41	18									
Bfj	10-15	14	4	7	11	12	20	53	39	8									
BC	15-43	20	4	8	15	17	26	70	27	3.									
R	43+																		

Physical and Chemical Analyses, MARCHHURST SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-10	5.0	4.5	12.7	1.2		47.9	0.0	0.3	0.4	2.1	1.0				0.6	0.6	0.1
Bfj	10-15	5.2	4.6	9.5	0.3			0.0	0.3	0.2	0.8	1.0				0.6	0.9	0.0
BC	15-43	5.1	4.7	2.4	1.0			0.1	0.1	0.1	0.2	0.9				0.2	0.0	0.0
R	43+																	

MTD ONTARIO 1982 PROFILE NO. 3496

LOCATION Rideau Tp., NTS Map Area 31G/4, 18 TVE 390 964

LANDFORM AND PARENT MATERIALS Nearly level, stony glacial till plain, with sediments having fine sandy loam textures

SITE Road cut

ELEVATION 96 m

SURFACE FEATURES 2% simple slope, slightly stony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Eluviated Melanic Brunisol, coarse loamy, mixed, nonclay, alkaline, strongly calcareous, mild perhumid

STATUS Modal

Morphological Description, MATILDA SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-18 (15-21)	10YR 2/1 m	FSL	weak to moderate, fine to medium, granular	weak, fine, granular	friable, nonplastic	
Ae	18-30 (8-15)	10YR 4/4 m	FSL	weak, medium to coarse, subangular blocky	weak, fine to medium, granular	friable, nonplastic	
Btjgj	30-43 (10-19)	10YR 2/2 m	FSL	weak, fine to medium, subangular blocky	weak, fine to medium, granular	friable, nonplastic	distinct, 10YR 3/4
Ckgj1	43-80 (30-38)	2.5Y 5/4 m	FSL	weak to moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	friable, nonplastic	distinct, 10YR 4/6
Ckgj2	80+	2.5Y 5/2 m	GFSL	weak to moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	friable, nonplastic	distinct, 5Y 5/3

MATILDA SERIES, Grenville Association

Physical and Chemical Analyses, MATILDA SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-18	5	3	7	10	17	16	53	30	17									
Ae	18-30	9	2	7	10	20	20	59	33	9	3								
Btjgj	30-43	5	3	5	9	18	20	56	31	13	6								
Ckgj1	43-80	9	4	5	8	21	23	61	32	7	2								
Ckgj2	80+	31	8	9	12	21	17	66	29	5									

Physical and Chemical Analyses, MATILDA SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-18		6.8	4.5			21.0											
Ae	18-30		6.6	0.9														
Btjgj	30-43		6.8	1.2														
Ckgj1	43-80		7.4	0.3	9.0													
Ckgj2	80+		7.6		19.2	0.7												

MUNSTER SERIES, Oka Association

MSR ONTARIO 1980 PROFILE NO. 3210

LOCATION Goulbourn Tp., NTS Map Area 31G/4, 18 TVF 268 003

LANDFORM AND PARENT MATERIALS Very gently sloping ridge of marine beach material

SITE Road cut

ELEVATION 120 m

SURFACE FEATURES 3% complex slope, moderately stony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Eluviated Melanic Brunisol, sandy skeletal, alkaline, extremely calcareous, mild humid

STATUS Modal

Morphological Description, MUNSTER SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Apk	0-18 (15-23)	10YR 2/2 m	VGL	moderate, medium, granular	moderate, fine, granular	slightly sticky, very friable, plastic	
Btjk	18-33 (10-17)	7.5YR 3/4 m	GL	moderate, medium to coarse, granular	moderate, fine to medium, granular	sticky, very friable, very plastic	
Bmk	33-50	10YR 4/3 m	VGCSL	single grain		nonsticky, loose, nonplastic	
Ck	50+	2.5Y 4/2 m	VGLCS	single grain		nonsticky, loose, nonplastic	

Physical and Chemical Analyses, MUNSTER SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Apk	0-18	60	22	11	6	4	7	49	32	20	7								
Btjk	18-33	40	1	9	6	5	10	41	35	24	9								
Bmk	33-50	66	24	17	10	6	6	62	22	16	8								
Ck	50+	81	45	19	8	5	5	82	14	4	3								

Physical and Chemical Analyses, MUNSTER SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Apk	0-18	7.6	7.4	7.0	27.4		42.5	0.0	0.6	1.7	14.9	0.8						
Btjk	18-33	7.7	7.4	2.8	6.5			0.0	0.4	1.7	13.3	0.7						
Bmk	33-50	7.8	7.5	1.6	29.1			0.0	0.3	1.5	15.1	0.6						
Ck	50+	7.9	7.6	1.1	45.3	1.5		0.0	0.2	1.0	14.4	0.7						

NGW ONTARIO 1980 PROFILE NO. 1107

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 159 217

LANDFORM AND PARENT MATERIALS Nearly level marine clay plain, with sediments having mainly silty clay loam and clay loam textures

SITE Hay field

ELEVATION 98 m

SURFACE FEATURES 1.5% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, fine clayey, neutral, mild subaquic

STATUS Modal

Morphological Description, NORTH GOWER SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-20 (19-22)	10YR 3/1 m	SICL	moderate, medium to coarse, granular	moderate, fine to medium, granular	slightly sticky, very friable, very plastic	
Bg1	20-46 (23-26)	2.5Y 5/2 m	SICL	weak to moderate, medium to coarse, subangular blocky	weak to moderate, medium, subangular blocky	slightly sticky, very friable, very plastic	common, fine, prominent, 7.5YR 5/6
Bg2	46-57 (8-11)	5Y 5/2 m	SIC	weak to moderate, medium, platy	weak to moderate, fine, platy	sticky, very friable, very plastic	common, fine, prominent, 7.5YR 5/6
Cg	57+	5Y 4/2 m	CL	moderate to strong, medium, subangular blocky	moderate to strong, fine to medium, subangular blocky	sticky, friable, very plastic	common, fine, prominent, 7.5YR 5/6

Physical and Chemical Analyses, NORTH GOWER SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-20	0	1	1	2	3	9	16	55	29	16	1.15		46.9	42.3		31.6	9.0	0.4
Bg1	20-46	0	0	0	2	3	14	19	50	31	10	1.45		34.3	26.5		13.9	11.9	0.2
Bg2	46-57	0	0	1	3	4	11	19	41	40	9	1.28		50.8	36.3		22.2	7.4	0.1
Cg	57+	0	0	1	1	3	16	21	42	37	18	1.40		37.2	32.6		20.6	2.4	0.2

Physical and Chemical Analyses, NORTH GOWER SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-20	7.0	6.8	6.6	1.0		16.4	0.3	25.0	4.8	0.4	5.0				0.1	0.1	0.0
Bg1	20-46	7.5	7.1	0.9			27.8	0.4	16.3.	4.3	0.3	2.0				0.0	0.0	0.0
Bg2	46-57	7.5	7.2	0.4	0.4		28.8	0.4	21.3	5.3	0.5	3.0				0.0	0.0	0.0
Cg	57+	7.5	7.1	0.4	0.5		25.9	0.3	16.3	4.6	0.5	6.0				0.0	0.0	0.0

OSGOODE SERIES, Osgoode Association

OGO ONTARIO 1979 PROFILE NO. 2135

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 164 203

LANDFORM AND PARENT MATERIALS Level marine plain, with sediments having loam textures

SITE Hay field

ELEVATION 108 m

SURFACE FEATURES 0.5% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, fine silty, alkaline, strongly calcareous, mild subaquic

STATUS Modal

Morphological Description, OSGOODE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-25 (25-26)	10YR 3/1 m	L	weak, medium to coarse, subangular blocky	weak, fine to medium, subangular blocky	firm, very plastic	
Bg1	25-56 (26-35)	5Y 4.5/1 m	L	weak, coarse, subangular blocky	weak, fine to medium, subangular blocky	friable, very plastic	common, fine, prominent, 10YR 4/6
Bg2	56-99 (36-60)	2.5Y 5/2 m	L	weak, coarse, platy	weak to moderate, medium to coarse, subangular blocky	friable, very plastic	common, fine prominent, 10YR 3/6
Ckg	99+	5Y 5/1 m	L	moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	friable, very plastic	common, medium, prominent, 7.5YR 4/4

Physical and Chemical Analyses, OSGOODE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-25	0	1	1	3	6	30	40	38	22	9	1.48	59	30.8	28.6	24.6	21.2	0.6	0.3
Bg1	25-56	0	1	1	1	4	37	44	36	20	3	1.67	65	28.1	24.4	19.5	14.2	0.4	0.1
Bg2	56-99	0	1	2	3	5	24	35	41	24	3	1.47	56	32.6	28.5	23.7	16.1	0.7	0.1
Ckg	99+	0	0	0	1	2	29	32	45	22	3	1.52	57	35.5	30.8	23.8	13.4	0.0	0.1

Physical and Chemical Analyses, OSGOODE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-25	7.4	7.1	5.1	0.8		54.0	0.4	13.8	4.1	0.2	7.0	0.2	0.3	0.0	0.1	0.1	0.0
Bg1	25-56	7.8	7.4	0.3	2.7		22.2	0.5	9.5	4.1	0.3	1.0	0.3	0.2	0.1	0.0	0.0	0.0
Bg2	56-99	7.7	7.3	0.2	0.2		24.8	0.4	7.5	3.3	0.3	1.0	0.3	0.2	0.0	0.0	0.0	0.0
Ckg	99+	8.2	7.7	0.1	11.0	0.4	17.8	0.4	17.0	3.0	0.3	1.0	0.2	0.1	0.0	0.0	0.0	0.0

PIPERVILLE SERIES, Osgoode Association

PPV ONTARIO 1982 PROFILE NO. 3542

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 TVF 054 266

LANDFORM AND PARENT MATERIALS Very gently sloping marine plain bordering dissected channel, with sediments having mainly very fine sandy loam textures

SITE Road cut

ELEVATION 95 m

SURFACE FEATURES 3% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, coarse loamy, mixed nonclay, neutral, mild perhumid

STATUS Modal

Morphological Description, PIPERVILLE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-15 (8-18)	10YR 3/2 m	VFSL	weak, fine to medium, granular	weak, very fine, granular	very friable, slightly plastic	
Bmgj1	15-24 (3-9)	10YR 3/4 m	VFSL	weak, fine to medium, granular	weak, fine, granular	very friable, slightly plastic	few, fine, distinct, 10YR 4/6
Bmgj2	24-50 (8-26)	10YR 4.5/6 m	VFSL	weak, fine to medium, subangular blocky	weak, fine, granular	very friable, slightly plastic	common, medium, distinct, 7.5YR 5/8
Bmgj3	50-54 (3-25)	2.5Y 5/4 m	LFS	weak, fine to medium, subangular blocky	weak, fine, granular	very friable, slightly plastic	common, medium, distinct, 10YR 5/6
Bg1	54-63 (4-16)	2.5Y 6/2 m	VFSL	weak to moderate, fine to medium, subangular blocky	weak, fine to medium, subangular blocky	very friable, slightly plastic	many, medium, prominent, 2.5YR 5/4
Bg2	63-86 (23-30)	2.5Y 5/2 m	VFSL	moderate, medium to coarse, subangular blocky	weak to moderate, fine to medium, subangular blocky	friable, slightly plastic	many, medium, prominent, 10YR 4/6
Cg	86+	5Y 5/2 m	L	weak to moderate, fine, platy	weak, very fine, platy	friable, slightly plastic	common, fine, prominent, 7.5YR 4/6 and many, medium, prominent, 10YR 5/8

PIPERVILLE SERIES, Osgoode Association

Physical and Chemical Analyses, PIPERVILLE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-15	1	0	0	1	10	41	52	31	17									
Bmgj1	15-24	0	0	1	1	14	38	54	29	8									
Bmgj2	24-50	0	0	0	1	33	40	74	23	4									
Bmgj3	50-54	0	0	0	22	21	35	78	19	3									
Bg1	54-63	0	0	0	0	4	57	62	32	7									
Bg2	63-86	0	0	0	1	27	28	56	33	11									
Cg	86+	0	0	0	0	5	32	37	47	16									

Physical and Chemical Analyses, PIPERVILLE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-15		7.0	5.7	0.5		23.0											
Bmgj1	15-24		5.7	2.9														
Bmgj2	24-50		5.3	1.2														
Bmgj3	50-54		5.3	0.4														
Bg1	54-63		5.3	0.2														
Bg2	63-86		5.3	0.2														
Cg	86+		5.5															

REEVECRAIG SERIES, *Reevecraig Association*

RVC ONTARIO 1980 PROFILE NO. 3112

LOCATION Goulbourn Tp., NTS Map Area 31G/4, 18 TVF 296 098

LANDFORM AND PARENT MATERIALS Very gently undulating marine sand plain, with sediments having mainly loamy fine sand textures

SITE Unproductive woodland; pit at toe of slope

ELEVATION 102 m

SURFACE FEATURES 4% complex slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy, mixed nonclay, alkaline, weakly calcareous, mild subaquic

STATUS Modal

Morphological Description, REEVECRAIG SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-19 (19-21)	10YR 3/1 m	VFSL	very weak, medium, platy	weak, fine to medium, granular	nonsticky, very friable, slightly plastic	
Bg	19-40 (15-21)	5Y 5/3 m	LFS	very weak, coarse, subangular blocky	very weak, medium, subangular blocky	nonsticky, very friable, nonplastic	many, medium, prominent, 7.5YR 4/6
Ckg	40+	5Y 5/3 m	LFS	very weak, coarse, subangular blocky	very weak, medium, subangular blocky	nonsticky, very friable, nonplastic	many, medium, prominent, 7.5YR 4/6

REEVECRAIG SERIES, Reevecraig Association

Physical and Chemical Analyses, REEVECRAIG SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-19	3	3	3	7	29	30	72	22	6	5	1.14		49.6	42.8		19.9	4.8	0.3
Bg	19-40	1	1	1	4	25	48	79	18	3	2	1.66		23.0	19.8		4.5	1.2	0.1
Ckg	40+	0	0	0	3	35	45	83	14	3	2	1.68		26.8	21.9		3.9	2.4	0.2

Physical and Chemical Analyses, REEVECRAIG SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap	0-19	7.7	7.4	2.9	0.8		23.0	0.2	25.0	1.2	0.1	1.0				0.1	0.1	0.0
Bg	19-40	7.7	7.3	0.6	0.5		6.6	0.2	10.0	0.7	0.1	1.0				0.1	0.0	0.0
Ckg	40+	8.0	7.5	0.1	4.7		3.8	0.2	16.3	0.9	0.1	1.0				0.0	0.0	0.0

RUBICON SERIES, Uplands Association

RUB ONTARIO 1981 PROFILE NO. 2515

LOCATION Osgoode Tp., NTS Map Area 31G/5, 18 TVF 527 124

LANDFORM AND PARENT MATERIALS Very gently undulating marine sand plain, with sediments having mainly medium sand textures

SITE Unproductive woodland

ELEVATION 102 m

SURFACE FEATURES 2% complex slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Humo-ferric Podzol, sandy, mixed nonclay, acid, mild perhumid

STATUS Modal; Ab horizon unique to this site

Morphological Description, RUBICON SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-17	10YR 3/4 d	LS	single grain		loose, nonplastic	
Aegj1	17-23	10YR 6/4 d	LS	single grain		loose, nonplastic	few, fine, prominent, 7.5YR 5/8
Ab	23-25	10YR 2/1 d	Organic				
Aegj2	25-28	10YR 6/4 d	S	single grain		loose, nonplastic	few, fine, prominent, 7.5YR 5/8
Bfgj	28-40	10YR 4/6 d	S	single grain		loose, nonplastic	few, fine, distinct, 7.5YR 5/8
BCgj	40-70	10YR 5/4 d	S	single grain		loose, nonplastic	common, medium, distinct, 10YR 5/6
Cgj	70+	10YR 5/3 d	S	single grain		loose, nonplastic	common, medium, prominent, 10YR 5/6

Physical and Chemical Analyses, RUBICON SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-17	3	1	19	51	12	3	86	10	4									
Aegj1	17-23	3	2	14	50	14	5	85	12	3									
Ab	23-25																		
Aegj2	25-28																		
Btgj	28-40	2	5	25	55	7	2	93	6	1									
BCgj	40-70	1	2	19	70	5	1	97	3	0									
Cgj	70+	1	5	22	62	8	1	98	2	0									

Physical and Chemical Analyses, RUBICON SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-17		5.5	3.2												0.2	0.3	
Aegj1	17-23		4.6	1.7												0.1	0.1	
Ab	23-25																	
Aegj2	25-28																	
Btgj	28-40		4.7	1.7												0.2	0.5	
BCgj	40-70		4.6	0.3												0.1	0.2	
Cgj	70+		4.8	0.3												0.1	0.1	

STE. ROSALIE SERIES, Rideau Association

STA ONTARIO 1980 PROFILE NO. 2811

LOCATION West Carleton Tp., NTS Map Area 31F/8, 18 IVF 175 318

LANDFORM AND PARENT MATERIALS Level marine clay plain, with sediments having heavy clay textures

SITE Hay field

ELEVATION 68 m

SURFACE FEATURES 0.5% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, very fine clayey, neutral, mild subaquic

STATUS Modal; has a few thin (1-2 cm) reddish brown heavy clay bands in Cg1 and Cg2

Morphological Description, SIE. ROSALIE SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-24 (23-29)	5Y 2.5/2 m	HC	moderate to strong, medium, subangular blocky	moderate to strong, fine to medium, subangular blocky	firm, very plastic	
Bg	24-36 (9-17)	2.5Y 4/2 m	HC	weak to moderate, fine to medium, subangular blocky	weak to moderate, fine, subangular blocky	firm, very plastic	common, fine, prominent, 5YR 4/6
Cg1	36-58 (18-23)	5Y 4/2 m	HC	weak to moderate, fine to medium, subangular blocky	weak to moderate, fine, subangular blocky	firm, very plastic	common, fine, prominent, 5YR 4/6
Cg2	58+	5Y 4/2 m	HC	moderate to strong, medium to coarse, subangular blocky	moderate to strong, fine to medium, subangular blocky	very firm, very plastic	common, medium, prominent, 5YR 4/6

Physical and Chemical Analyses, STE. ROSALIE SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-24	0						9	22	69	25	1.23		46.7	41.8		28.5	15.4	0.2
Bg	24-36	4						5	16	79	23	1.30		42.5	36.1		26.2	4.8	
Cg1	36-58	3	1	7	4	1	1	14	16	70	20	1.28		53.4	43.7		28.9	5.8	
Cg2	58+	0						3	17	80	27	1.26		52.8	45.2		34.8	5.9	

Physical and Chemical Analyses, STE. ROSALIE SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-24	6.2	5.9	3.9	0.4		60.3	0.4	36.3	14.2	0.8	4.0				0.1	0.1	0.0
Bg	24-36	6.3	5.9	1.2	0.3		60.0	0.7	33.8	15.8	0.8	3.0				0.0	0.0	0.0
Cg1	36-58	6.3	6.0	0.8	0.4		57.7	0.8	28.8	14.2	0.8	2.0				0.0	0.0	0.0
Cg2	58+	6.8	6.5	0.5	0.4		52.0	0.9	25.0	13.8	1.0	4.0				0.0	0.0	0.0

ST. SAMUEL SERIES, Uplands Association

SSM ONTARIO 1982 PROFILE NO. 3531

LOCATION Osgoode Tp., NTS Map Area 31G/5, 18 TVF 532 122

LANDFORM AND PARENT MATERIALS Level marine sand plain, with sediments having mainly medium sand textures

SITE Productive woodland

ELEVATION 98 m

SURFACE FEATURES 0.5% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy, mixed nonclay, neutral, mild subaquic

STATUS Modal

Morphological Description, ST. SAMUEL SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15 (11-18)	10YR 2/1 m	SL	weak, fine to medium, granular	weak, fine, granular	very friable, nonplastic	
Aegj	15-21 (4-8)	2.5Y 5/4 m	LS	single grain		loose, nonplastic	few, medium, prominent, 5YR 4/6
Bfjgj	21-33 (9-17)	10YR 5/8 m	LS	single grain			common, medium, prominent, 5YR 4/6
BCgj	33-41 (4-14)	2.5Y 4/4 m	S	single grain		loose, nonplastic	common, medium, prominent, 7.5YR 4/6
Cg	41+	2.5Y 4/2 m	S	single grain		loose, nonplastic	few, coarse, prominent, 5YR 4/6

Physical and Chemical Analyses, ST. SAMUEL SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-15	3	4	18	41	11	5	79	11	10									
Aegj	15-21	2	6	18	42	12	5	84	12	4									
Bfjgj	21-33	1	7	17	41	14	5	85	9	6									
BCgj	33-41	1	3	14	53	17	3	91	6	4									
Cg	41+	2	7	17	61	11	1	96	2	2.									

Physical and Chemical Analyses, ST. SAMUEL SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ah	0-15		5.7	4.1			19.0									0.2	0.1	
Aegj	15-21		5.6	1.0												0.1	0.0	
Bfjgj	21-33		5.7	0.5												0.3	0.0	
BCgj	33-41		5.7	0.2												0.1	0.0	
Cg	41+		5.7													0.0	0.0	

ST. THOMAS SERIES, St. Thomas Association

SHO ONTARIO 1979 PROFILE NO. 2143

LOCATION Cumberland Tp., NTS Map Area, 18 TVF 695 219

LANDFORM AND PARENT MATERIALS Hummocky fluvial and/or eolian sand plain, with sediments having mainly fine sand textures

SITE Unproductive woodland

ELEVATION 78 m

SURFACE FEATURES 9% complex slope, nonstony, nonrocky

DRAINAGE Rapidly drained

CLASSIFICATION Orthic Humo-ferric Podzol, sandy, acid, mild subhumid

STATUS Modal

Morphological Description, ST. THOMAS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
LFH	3-0	10YR 2/1 m	Organic				
Ah	0-3 (2-4)	10YR 2/1 m	LFS	very weak, medium to coarse, granular	very weak, fine to medium, granular	nonsticky, very friable, soft, nonplastic	
Ae	3-4 (0-2)	10YR 4/2 m	VFS	very weak, fine to medium, granular		nonsticky, very friable, soft, nonplastic	
Bf	4-26 (16-24)	7.5YR 3/4 m	VFS	very weak, medium, granular		nonsticky, very friable, soft, nonplastic	
BC	26-64 (36-40)	10YR 3/6 m	FS	single grain		nonsticky, loose, nonplastic	
C	64+	2.5Y 6/4 m	FS	single grain		nonsticky, loose, nonplastic	

Physical and Chemical Analyses, ST. THOMAS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2µ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
LFH	3-0																		
Ah	0-3	0	1	0	3	37	41	83	9	8	4								0.3
Ae	3-4																		
Bf	4-26	0	0	0	2	35	53	90	8	2	0	0.89	34	66.2	38.3	18.1	12.8	35.2	0.1
BC	26-64	0	0	0	1	61	32	95	5	0	0	1.29	46	41.9	23.1	6.8	4.6	36.4	0.0
C	64+	0	0	0	4	65	31	99	1	0	0	1.43	51	32.1	15.1	2.9	1.9	27.8	0.0

Physical and Chemical Analyses, ST. THOMAS SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
LFH	3-0																	
Ah	0-3	5.7	5.1	10.3	0.4		48.5	0.4	5.5	1.1	0.3	11.0	0.4	0.5	0.0	0.1	0.1	0.0
Ae	3-4																	
Bf	4-26	5.5	4.9	3.9	0.3		26.1	0.4	1.0	0.2	0.1	4.0	0.9	1.1	0.0	0.3	0.2	0.0
BC	26-64	5.4	4.9	0.8	0.0		13.9	0.3	0.2	0.1	0.0	5.0	0.2	0.5	0.0	0.0	0.1	0.0
C	64+	5.8	5.1	0.1	0.1	0.1	5.4	0.3	0.2	0.1	0.0	4.0	0.1	0.1	0.0	0.0	0.0	0.0

UPLANDS SERIES, Uplands Association

UPD ONTARIO 1982 PROFILE NO. 3523

LOCATION Osgoode Tp., NTS Map Area 31G/4, 18 TVE 515 982

LANDFORM AND PARENT MATERIALS Very gently sloping marine or fluvial sand ridge, with sediments having sand and coarse sand textures

SITE Productive woodland

ELEVATION 90 m

SURFACE FEATURES 3% simple slope, nonstony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Humo-ferric Podzol, sandy, mixed nonclay, acid, mild humid

STATUS Modal; often consists entirely of medium sand

Morphological Description, UPLANDS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-16 (10-17)	10YR 3/2 m	CS	very weak, fine to medium, granular	very weak, fine, granular	very friable, nonplastic	
Ae	16-22 (4-10)	10YR 5/4 m	S	single grain		loose, nonplastic	
Bf	22-33 (7-14)	7.5YR 4/6 m	CS	single grain		loose, nonplastic	
Bfj	33-57 (20-25)	7.5YR 5/8 m	CS	single grain		loose, nonplastic	
BC	57-87 (23-30)	10YR 5/6 m	S	single grain		loose, nonplastic	
C	87+	10YR 5/4 m	S	single grain		loose, nonplastic	

Physical and Chemical Analyses, UPLANDS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ah	0-16	1	4	23	44	15	2	88	7	4									
Ae	16-22	2	2	17	38	28	3	89	9	2									
Bf	22-33	7	15	31	38	9	1	94	4	1									
Bfj	33-57	5	9	20	47	22	1	97	2	1									
BC	57-87	4	9	24	51	14	0	98	1	1									
C	87+	0	1	8	43	43	1	96	4	0									

Physical and Chemical Analyses, UPLANDS SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ah	0-16		4.6	4.5			14.0									0.1	0.2	
Ae	16-22		4.8	1.6												0.1	0.2	
Bf	22-33		5.2	2.1												0.1	0.3	
Bfj	33-57		5.1	0.7												0.1	0.1	
BC	57-87		4.9	0.3												0.0	0.0	
C	87+		5.1													0.0	0.0	

VARS SERIES, Leitrim Association

VRS ONTARIO 1981 PROFILE NO. 2511

LOCATION Cumberland Tp., NTS Map Area 31G/6, 18 TVF 711 193

LANDFORM AND PARENT MATERIALS Very gently sloping, shaly, glacial till ridge

SITE Cultivated corn field

ELEVATION 83 m

SURFACE FEATURES 3% simple slope, nonstony, nonrocky

DRAINAGE Well drained

CLASSIFICATION Orthic Melanic Brunisol, fragmental, mixed nonclay, acid, mild humid

STATUS Modal

Morphological Description, VARS SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-15	5YR 3/2 m	GL	moderate, fine to medium, granular		loose, nonplastic	
Bm	15-32	5YR 4/4 m	VGL	weak to moderate, very fine to fine, granular		loose, nonplastic	
BC	32-55	5YR 3/3 m	GCSL	weak to moderate, very fine to fine, granular		loose, nonplastic	
C	55+	5YR 3/3 m	VGCSL	weak to moderate, very fine to fine, granular		loose, nonplastic	

Physical and Chemical Analyses, VARS SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-15	36	13	12	6	4	7	42	49	9									
Bm	15-32	51	12	13	11	6	8	50	39	12									
BC	32-55	42	21	18	11	6	6	62	31	7									
C	55+	61	26	24	13	4	4	70	21	8									

Physical and Chemical Analyses, VARS SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-15		6.5	6.6														
Bm	15-32		6.1	0.9														
BC	32-55		5.6	0.4														
C	55+		5.3	0.7														

VAUDREUIL SERIES, Jockvale Association

VUD ONTARIO 1980 PROFILE NO. 1120

LOCATION City of Kanata, NTS Map Area 31G/5, 18 TVF 276 230

LANDFORM AND PARENT MATERIALS Nearly level marine or fluvial sand plain, with sediments having mainly loamy fine sand and fine sand textures

SITE Abandoned farmland

ELEVATION 69 m

SURFACE FEATURES 1% simple slope, nonstony, nonrocky

DRAINAGE Poorly drained

CLASSIFICATION Orthic Humic Gleysol, sandy, mixed nonclay, neutral, mild subaquic

STATUS Modal

Morphological Description, VAUDREUIL SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-18 (17-22)	10YR 3/2 m	VFSL	weak, coarse, subangular blocky	weak, medium, granular	nonsticky, very friable, nonplastic	
Bg1	18-31 (14-21)	2.5Y 5/2 m	LFS	weak, medium to coarse, subangular blocky	weak, medium to coarse, granular	nonsticky, very friable, nonplastic	common, medium, prominent, 7.5YR 4/6
Bg2	31-63 (21-32)	10YR 5.5/1 m	VFS	weak, coarse, subangular blocky	weak, medium to coarse, granular	nonsticky, very friable, nonplastic	common, medium, prominent, 7.5YR 5/6
Bg3	63-78 (14-19)	2.5Y 5/2 m	LFS	weak, medium to coarse, subangular blocky	weak, medium to coarse, granular	nonsticky, very friable, nonplastic	many, coarse, prominent, 7.5YR 5/6
Cg	78+	2.5Y 5/2 m	FS	weak, medium to coarse subangular blocky		nonsticky, very friable, nonplastic	common, coarse, prominent, 10YR 5/6

Physical and Chemical Analyses, VAUDREUIL SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap	0-18	0	0	0	3	6	46	75	16	9		1.23		42.4	36.8		18.1	7.6	0.2
Bg1	18-31	0	0	0	4	5	43	82	15	3		1.49		31.9	26.7		4.5	2.5	0.1
Bg2	31-63	0	0	0	1	36	53	90	8	2		1.63		27.4	21.8		1.9	5.7	0.1
Bg3	63-78	0	0	0	2	41	43	86	7	7		1.59		29.4	23.6		2.0	0.7	0.1
Cg	78+	0	0	1	4	50	38	93	4	3		1.65		32.2	24.3		4.4	2.8	0.1

Physical and Chemical Analyses, VAUDREUIL SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Al	Mn	Pyrophosphate Fe	Al	Mn
Ap	0-18	5.3	4.9	3.2	0.3		18.7	0.2	5.0	0.5	0.1	3.0				0.2	0.1	0.0
Bg1	18-31	6.1	5.6	0.7	0.4		8.7	0.3	5.0	0.4	0.0	3.0				0.1	0.1	0.0
Bg2	31-63	6.3	5.7	0.2	0.2		3.9	0.3	2.5	0.5	0.0	3.0				0.1	0.0	0.0
Bg3	63-78	7.1	6.3	0.1	0.4		6.3	0.3	7.5	1.5	0.1	4.0				0.1	0.0	0.0
Cg	78+	6.6	6.1	0.0	0.3		3.0	0.3	5.0	1.2	0.1	3.0				0.0	0.0	0.0

WDV ONTARIO 1977 PROFILE NO. 448

LOCATION Cumberland Tp., NTS Map Area 31G/6, 18 TVF 747 352

LANDFORM AND PARENT MATERIALS Nearly level marine clay plain, with sediments having mainly heavy clay textures

SITE Cultivated forage field

ELEVATION 69 m

SURFACE FEATURES 1% simple slope, nonstony, nonrocky

DRAINAGE Imperfectly drained

CLASSIFICATION Gleyed Melanic Brunisol, fine clayey, neutral, mild perhumid

STATUS Modal

Morphological Description, WENDOVER SERIES

Horizon	Depth (range) cm	Colour moist-m dry-d	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap1	0-8	10YR 3/3 m	SIC			friable	
Ap2	8-21	10YR 3/3 m	SIC			friable	few, medium, faint
Bmgj1	21-29	10YR 4/4 m	SIC			friable	common, medium, faint, 5YR 5/6
Bmgj2	29-41	5YR 4/6 m	HC			friable	few, medium, faint
Bmgj3	41-64	5YR 4/6 m	HC			friable	
Cg1	64-88	7.5YR 4/4 m and 10YR 5/2 m	HC			friable	
Cg2	88+	10YR 4/3 m	HC			friable	

WENDOVER SERIES, Bearbrook Association

Physical and Chemical Analyses, WENDOVER SERIES

Horizon	Depth cm	% Grav. >2 mm	Sand Fraction % VCS 2-1 mm	CS 1-.5 mm	MS .5-.25 mm	FS .25-.1 mm	VFS .1-.05 mm	Sand %	Silt %	Clay %	Fine Clay % <0.2μ	Bulk Dens. g/cm^3	Poro-sity %	% Moisture Retention(g/g) 0 kPa	5 kPa	33 kPa	1500 kPa	Hydr. Cond. cm/hr	Elec. Cond. mmhos/cm
Ap1	0-8	0	3	3	2	2	3	13	46	41									
Ap2	8-21	0	3	3	3	3	4	15	44	41									
Bmgj1	21-29	0	1	2	2	3	3	10	43	47									
Bmgj2	29-41							5	26	68									
Bmgj3	41-64							2	22	77									
Cg1	64-88							1	24	76									
Cg2	88+							1	18	81									

Physical and Chemical Analyses, WENDOVER SERIES (continued)

Horizon	Depth cm	pH in H_2O	pH in $CaCl_2$	Or-ganic Matter %	$CaCO_3$ Equiv. %	Cal/Dol Ratio	C.E.C. me/100g	Exchangeable Cations (me/100g) Na	Ca	Mg	K	Avail-able P ppm	Fe, Al and Mn % Oxalate Fe	Oxalate Al	Oxalate Mn	Pyrophosphate Fe	Pyrophosphate Al	Pyrophosphate Mn
Ap1	0-8	5.8	5.7	5.9	1.5				8.0	5.4	0.6	5.0	1.2	0.3	0.1	0.2	0.1	
Ap2	8-21	5.5	5.4	3.9	3.0		42.1		6.0	3.3	0.3	4.0	1.6	0.4	0.1	0.2	0.1	
Bmgj1	21-29	5.7	5.7	1.1	0.0				8.0	7.5	0.3	7.0	1.3	0.3	0.1	0.1	0.2	
Bmgj2	29-41	6.4	6.1	0.7	0.0				14.3	13.3	0.6	10.0	0.7	0.4	0.0	0.1	0.1	
Bmgj3	41-64	6.7	6.4	0.4	0.1		59.5		14.3	13.3	0.7	4.0	0.4	0.3	0.0	0.0	0.0	
Cg1	64-88	6.9	6.5	0.3	0.1				12.3	11.6	0.6	3.0	0.4	0.3	0.0	0.0	0.0	
Cg2	88+	7.3	6.8		0.0		51.3		12.3	10.0	0.7	2.0	0.3	0.3	0.0	0.0	0.0	

LOCATION City of Gloucester, NTS Map Area 31G/6
18 TVF 596 284

LANDFORM AND PARENT MATERIALS Basin bog with sediments consisting of sphagnum moss overlying woody sedge fen peat

SITE Larch, birch, and sphagnum wetland

ELEVATION 71 m

SURFACE FEATURES Nearly level

DRAINAGE Poorly drained

CLASSIFICATION Fibric Mesisol, fibric, euic, mild aquic

STATUS Modal

Morphological Description, BLACKBURNE SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Of	0-74	5YR 3/2	sphagnum	fibric
Om	74-254	10YR 2/1	woody sedge fen peat	mesic
Oh	254-345	7.5YR 2/0	woody sedge fen peat	humic
II Cg	345+	5GY 6/1		

Physical and Chemical Analyses, BLACKBURNE SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Of	0-74	50	68	3	3.6	3.2	47.8	1.1	16.9	13.1		1.5	31.5
Om	74-254	10	30	7	5.4	5.0	52.3	1.3	27.9	35.2		0.0	63.1
Oh	254-345	8	64	9	5.6	5.2	47.9	1.7	37.5	45.5			83.0
II Cg	345+				7.2	6.8	1.4	0.1	6.0	11.5			17.5

LOCATION	Rideau Tp., NTS Map Area 31G/4, 18 TVE 304 890
LANDFORM AND PARENT MATERIALS	Horizontal basin swamp, with sediments consisting mainly of woody forest peat
SITE	Treed wetland
ELEVATION	114 m
SURFACE FEATURES	Depressional
DRAINAGE	Very poorly drained
CLASSIFICATION	Terric Mesic Humisol, humic, euic, mild peraquic, clayey
STATUS	Modal

Morphological Description, BURRITTS RAPIDS SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh1	0-74	5YR 2.5/1	woody forest peat	humic
Oh2	74-120	5YR 2.5/1	sedge fen peat	humic
Om	120-157	5YR 2.5/1	woody forest peat	mesic
Cg	157-188	5Y 5/1	silty clay	
R	188+			

CORKERY SERIES, Huntley Association

LOCATION	West Carleton Tp., NTS Map Area 31F/1, 18 TVF 153 107
LANDFORM AND PARENT MATERIALS	Horizontal stream swamp, with sediments mainly consisting of woody forest peat
SITE	Treed wetland
ELEVATION	125 m
SURFACE FEATURES	Nearly level
DRAINAGE	Very poorly drained
CLASSIFICATION	Humic Mesisol, humic, euic, mild peraquic
STATUS	Modal

Morphological Description, CORKERY SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh1	0-22	5YR 2.5/1	woody forest peat	humic
Oh2	22-78	5YR 2.5/1	woody forest peat	humic
Om1	78-141	5YR 3/2	sedge fen peat	mesic
Om2	141-209	5YR 2.5/2	woody forest peat	mesic
Om3	209-245	5YR 2.5/2	woody forest peat	mesic
Om4	245-281	5YR 2.5/1	woody forest peat	mesic
II Cg	281+	5GY 4/1	sandy loam	

Physical and Chemical Analyses, CORKERY SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Oh1	0-22	8	48	28	7.0	6.8	43.4	1.8	125.2	19.7	0.4		145.4
Oh2	22-78	8	46	17	6.7	6.4	42.7	1.5	138.7	20.8	0.3		159.9
Om1	78-141	14	72	12	6.3	5.9	44.8	1.8	126.7	18.9	0.3		145.9
Om2	141-209	12	60	18	6.2	5.8	42.1	1.6	125.2	18.9	0.2		144.4
Om3	209-245	28	70	15	5.9	5.6		1.9	108.0	18.6	0.2		126.9
Om4	245-281	10	52	18	6.0	5.7		1.9	114.7	19.0	0.3		134.0
II Cg	281+				7.3	6.9	2.5	0.0	9.7	0.9			10.9

LOCATION West Carleton Tp., NTS Map Area 31F/1, 18 TVF 153 106

LANDFORM AND PARENT MATERIALS Horizontal stream swamp, with sediments consisting of woody forest peat

SITE Treed wetland

ELEVATION 125 m

SURFACE FEATURES Nearly level

DRAINAGE Very poorly drained

CLASSIFICATION Typic Mesisol, mesic, euic, mild peraquic

STATUS Modal

Morphological Description, GLENDALE SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Om1	0-28	5YR 2.5/1	woody forest peat	mesic
Om2	28-90	5YR 2.5/1	woody forest peat	mesic
Om3	90-140	5YR 2.5/2	woody forest peat	mesic
Om4	140-166	5YR 2.5/1	woody forest peat	mesic
Om5	166-222	5YR 2.5/2	woody forest peat	mesic
II Cg	222+	5GY 5/1	sandy loam	

Physical and Chemical Analyses, GLENDALE SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Om1	0-28	10	52	25	6.9	6.6	38.4	2.1	129.7	17.9	0.4		148.1
Om2	28-90	10	40	26	6.5	6.2	41.8	1.8	125.2	18.7	0.3		144.3
Om3	90-140	16	60	15	6.1	5.8	41.9	1.7	123.7	17.6	0.3		141.6
Om4	140-166	10	46	20	5.9	5.6	42.7	1.7	116.2	19.2	0.3		135.7
Om5	166-222	10	52	16	6.1	5.7	43.5	1.7	116.2	18.2	0.3		134.8
II Cg	222+				7.2	6.8	1.7	0.1	9.1	0.9	0.2		10.3

LEMIEUX SERIES, Lemieux Association

LOCATION City of Gloucester, NTS Map Area 31G/6, 18 TVF 596 286

LANDFORM AND PARENT MATERIALS Horizontal fen, with sediments consisting of sedge fen peat

SITE Sedge wetland

ELEVATION 71 m

SURFACE FEATURES Level

DRAINAGE Very poorly drained

CLASSIFICATION Humic Mesisol, mesic, euic, mild peraquic

STATUS Modal

Morphological Description, LEMIEUX SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Om	0-102	5YR 3/2	sedge fen peat	mesic
Oh	102-185	7.5YR 2/0	sedge fen peat	humic
II Cg	185+	5Y 5/1	clay	

Physical and Chemical Analyses, LEMIEUX SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Om	0-102	10	44	0.1	4.1	3.7	42.2	1.2	19.4	13.6		1.7	34.7
Oh	102-185	6	44	0.1	5.2	4.8	44.5	1.8	36.0	26.5		0.1	62.6
II Cg	185+					5.7	3.8	0.2	8.1	7.3			15.4

MANION CORNERS SERIES, Goulbourn Association

LOCATION	West Carleton Tp., NTS Map Area 31F/1, 18 TVF 154 107	SURFACE FEATURES	Nearly level
LANDFORM AND PARENT MATERIALS	Horizontal stream swamp, with sediments consisting of woody forest peat	DRAINAGE	Very poorly drained
		CLASSIFICATION	Terric Humic Mesisol, humic, euic, mild peraquic
SITE	Treed wetland	STATUS	Modal
ELEVATION	125 m		

Morphological Description, MANION CORNERS SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh	0-35	10YR 2/1	woody forest peat	humic
Om1	35-79	5YR 2.5/1	woody forest peat	mesic
Om2	79-108	5YR 2.5/1	woody forest peat	mesic
II Cg	108-195	5Y 4/1	sandy loam	
III Ckg	195+	5Y 5/1	silty clay	

Physical and Chemical Analyses, MANION CORNERS SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Oh	0-35	8	42	19	6.6	6.3	35.9	2.1	93.0	9.9	0.5		237
Om1	35-79	12	68	12	6.0	5.7	40.0	2.1	80.2	12.6	0.5		213
Om2	79-108	16	68	31	6.0	5.7	34.9	1.4	49.0	10.1	0.4		186
II Cg	108-195					7.1	1.3	0.1					
III Ckg	195+												

MER BLEUE SERIES, Mer Bleue Association

LOCATION	City of Gloucester, NTS Map Area 31G/6, 18 TVF 596 285	SURFACE FEATURES	Nearly level
LANDFORM AND PARENT MATERIALS	Basin bog with sediments consisting of sphagnum moss overlying woody sedge fen peat	DRAINAGE	Poorly drained
		CLASSIFICATION	Typic Mesisol, fibric, euic, mild aquic
SITE	Sphagnum and ericaceous shrub wetland		
		STATUS	Modal
ELEVATION	71 m		

Morphological Description, MER BLEUE SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Of	0-30	10YR 3/2	sphagnum	fibric
Om1	30-145	7.5YR 2/0	woody sedge fen peat	mesic
Om2	145-225	7.5YR 2/0	woody sedge fen peat	mesic
II Cg	225+	5YR 5/1	clay	

Physical and Chemical Analyses, MER BLEUE SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Of	0-30	64	72	7			47.6	1.2					
Om1	30-145	20	60	5	4.6	4.1	51.2	1.3	32.2	23.9		0.1	56.2
Om2	145-225	10	40	8	5.4	5.1	48.3	1.6	43.9	35.1		0.1	79.1
II Cg	225+					6.2	5.0	0.2	13.9	7.3			21.2

LOCATION West Carleton Tp., NTS Map Area 31F/1, 18 TVF 153 106

LANDFORM AND PARENT MATERIALS Horizontal stream swamp, with sediments consisting of woody forest peat

SITE Treed wetland

ELEVATION 125 m

SURFACE FEATURES Nearly level

DRAINAGE Very poorly drained

CLASSIFICATION Mesic Humisol, humic, euic, mild peraquic

STATUS Modal

Morphological Description, MERSEA SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh1	0-15	10YR 2/1	woody forest peat	humic
Oh2	15-79	5YR 2.5/1	woody forest peat	humic
Oh3	79-126	5YR 2.5/1	woody forest peat	humic
Om	126-314	5YR 2.5/2	woody forest peat	mesic
II Cg	314+	5GY 4/1	sandy loam	

Physical and Chemical Analyses, MERSEA SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Oh1	0-15	8	42	28	7.0	6.8	36.8	2.0	120.7	19.4	0.4		140.6
Oh2	15-79	8	52	19	6.7	6.3	41.8	1.6	129.7	20.3	0.3		150.4
Oh3	79-126	5	50	19	6.2	5.9	42.4	1.8	125.2	20.9	0.3		146.6
Om	126-314	12	60	25	5.9	5.8	42.1	1.9	101.2	20.9	0.3		122.5
II Cg	314+				6.9	6.6	1.7	0.1	8.3	1.5	0.3		10.1

MUNROE SERIES, Goulbourn Association

LOCATION	Rideau Tp., NTS Map Area 31G/4, 18 TVE 396 856	SURFACE FEATURES	Depressional
LANDFORM AND PARENT MATERIALS	Horizontal basin swamp, with sediments consisting of woody forest peat and sedge fen peat	DRAINAGE	Very poorly drained
SITE	Treed wetland	CLASSIFICATION	Terric Humisol, humic, euic, mild peraquic, coarse loamy
ELEVATION	102 m	STATUS	Modal

Morphological Description, MUNROE SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh1	0-59	5YR 2.5/1	woody forest peat	humic
Oh2	59-108	5YR 2.5/1	sedge fen peat	humic
Ckg	108+	5Y 6/1	sandy loam	

SUMMERSTOWN SERIES, Malakoff Association

LOCATION Goulbourn Tp., NTS Map Area 31G/4, 18 TVE 330 990

LANDFORM AND PARENT MATERIALS Horizontal fen with sediments consisting of woody sedge fen peat overlying sedge fen peat

SITE Sedge wetland

ELEVATION 96 m

SURFACE FEATURES Level

DRAINAGE Very poorly drained

CLASSIFICATION Terric Humisol, humic, euic, mild peraquic

STATUS Modal

Morphological Description, SUMMERSTOWN SERIES

Horizon	Depth cm	Colour (moist)	Peat Material or Texture	Stage of Decomposition
Oh1	0-85	5YR 2.5/1	woody sedge fen peat	humic
Oh2	85-143	5YR 2.5/1	sedge fen peat	humic
II Cg	143+	5Y 5/1	silty clay	

Physical and Chemical Analyses, SUMMERSTOWN SERIES

Horizon	Depth	Fiber Content %		Ash	pH		Org.C	N	Exchange Analysis (me/100g)				
		Rubbed	Unrubbed	%	H_2O	$CaCl_2$	%	%	Ca	Mg	K	Al	C.E.C.
Oh1	0-85	8	56	12	6.0	5.6	27.9	1.9	45.1	17.3	0.5		194
Oh2	85-143	6	68	19	6.0	5.7	27.7	2.1	75.0	21.2	0.5		
II Cg	143+					7.0		0.1					

Table 1. Engineering mechanical analysis and soil classification for horizons of selected soils of the Ottawa-Carleton Region.

Association (Symbol)	Series	Horizon	Depth cm	Mechanical Analysis: Total Percent Grav.	Sand	Silt	Clay	% Passing Sieve #10	#40	#200	% Smaller than .05mm	.005mm	Soil Classification: CSSC Texture	UNIFIED	AASHO
BEARBROOK (B)	Bearbrook	Ap	0-16	1	9	43	48						SIC		
		Bg1	16-31	0	2	33	65		100	98	97	68	HC	CI	A-7-6(19)
		Bg2	31-48	0	2	47	51						SIC		
		Bg3	48-55	0	4	43	53						SIC		
		(Bg2 + Bg3)	31-55						100	98	97	75		CI	A-7-6(18)
		BCg	55-80	0	2	17	80						HC		
		Ckg	80+	0	4	23	73	99	98	97	96	85	HC	CI	A-7-6(20)
CASTOR (C)	Bainsville	Ap	0-22	0	44	44	12						L		
		Bg1	22-37	0	64	34	2						VFSL		
		Bg2	37-49	0	40	45	15						L		
		(Bg1 + Bg2)	22-49					99	98	85	60	9		SM	A-2-4
		II Cg	49+	0	8	44	48		100	96	95	65	SIC	CL	A-7-6(14)
CHATEAUGUAY (CH)	MacDonald	Ap	0-22	10	23	56	21						SIL		
		Bg	22-28	24	37	49	14						L		
		Cg	28-45	3	24	57	24						SIL		
		(Bg + Cg)	22-45					96	90	81	79	37		CL	A-6(10)
		II Cg	45-54	4	43	43	14						L		
		III Ckg	54+	44	62	30	8	57	48	32	28	9	GSL	SM	A-2-4

Table 1. continued

Association (Symbol)	Series	Horizon	Depth cm	Mechanical Analysis: Grav.	Total Percent: Sand	Silt	Clay	% Passing Sieve: #10	#40	#200	% Smaller than: .05mm	.005mm	Soil Classification: CSSC Texture	UNIFIED	AASHO
DALHOUSIE (D)	Brandon	Ap	0-25	0	14	39	47						C		
		Bg1	25-45	0	13	32	55						C		
		Bg2	45-69	0	15	35	50						C		
		(Bg1 + Bg2)	25-69						100	96	92	63		CI	A-7-6(17)
		Cg	69+	0	16	34	50		100	97	93	60	C	CL	A-7-6(16)
GRENVILLE (G)	Grenville	Ap1	0-19	8	59	30	11						SL		
		Ap2	19-35	5	62	33	5						SL		
		Ae	35-55	5	63	32	5						SL		
		Bt	55-77	8	56	26	18						SL		
		(Ae + Bt)	35-77					96	88	54	47	13		SM	A-4(4)
		BC	77-92	5	61	28	11						SL		
		Ck	92+	12	65	30	5	80	71	44	36	16	SL	SM	A-4(2)
IRONSIDE (I)	Dwyer Hill	Ap	0-18	2	87	7	6						FS		
		Bmgj	18-31	5	92	7	1						FS		
		Cg	31-52	3	94	6	1						FS		
		(Bmgj + Cg)	18-52					98	97	14	10	3		SM	A-2-4
		II Ckg	52+	25	42	36	22	78	70	49	45	22	GL	SC	A-4(3)

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Table 1. continued

Association (Symbol)	Series	Horizon	Depth cm	Mechanical Analysis: Grav.	Total Percent: Sand	Silt	Clay	% Passing Sieve: #10	#40	#200	% Smaller than: .05mm	.005mm	Soil Classification: CSSC Texture	UNIFIED	AASHO
JOCKVALE (J)	Vaudreuil	Ap	0-18	0	75	16	9						VFSL		
		Bg1	18-31	0	82	15	3						LFS		
		Bg2	31-63	0	90	8	2						VFS		
		Bg3	63-78	0	87	7	6						LFS		
		(Bg2 + Bg3)	31-78						100	36	17	5		SM	A-2-4
		Cg	78+	0	93	4	3	99	98	35			FS	SM	A-2-4
KARS (K)	Kars	Ap	0-22	37	70	24	6						GCSL		
		Btj	22-30	27	67	24	9						GCSL		
		Bm	30-57	40	82	14	4						GLCS		
		Ck	57+	80	89	9	2	29	16	9	8	2	VGCS	SP-SM	A-1
MANOTICK (M)	Becketts Creek	Ap	0-25	0	85	10	5						S		
		Bm	25-34	0	95	4	1						FS		
		C	34-43	0	95	4	1						FS		
		II Cgj	43-50	10	92	8	0						S		
		III Cg	50+	0	16	36	48	48	39	31	31	4	C	SM	A-2-4
MILLE ISLE (MI)	Constance Bay	Ah	0-8	0	89	7	4						CS		
		Aej	8-10												
		Bm	10-24	0	96	3	1						CS		
		BC	24-60	0	98	2	0						CS		
		C	60+	0	99	1	0	99	20	1			CS	SP	A-3

Table 1. continued

Association (Symbol)	Series	Horizon	Depth cm	Mechanical Analysis: Grav.	Total Percent: Sand	Silt	Clay	% Passing Sieve: #10	#40	#200	% Smaller than: .05mm	.005mm	Soil Classification: CSSC Texture	UNIFIED	AASHO
NORTH GOWER (NG)	North Gower	Ap	0-20	0	30	42	28						CL		
		Bg1	20-31	0	23	40	37						CL		
		Bg2	31-51	0	16	43	41						SIC		
		(Bg1 + Bg2)	20-51					100	99	90	82	46		CL	A-6(11)
		Cg	51+	0	28	38	34		100	91	84	45	CL	CL	A-6(12)
OKA (O)	Munster	Apk	0-18	60	49	32	19						VGL		
		Btjk	18-33	40	41	35	24						GL		
		Bmk	33-50	66	62	22	16						VGCSL		
		Ck	50+	81	82	14	4	18	9	7	6	2	VGLCS	SW-SM	A-3
OSGOODE (OS)	Osgoode	Ap	0-25	0	40	38	22						L		
		Bg1	25-56	0	44	36	20	100	98	95	70	30	L	CL	A-6(9)
		Bg2	56-99	0	35	41	24	100	99	94	77	30	L	CL	A-6(10)
		Ckg	99+	0	32	45	23	100	99	95	80	27	L	CL	A-6(10)
QUEENSWAY (Q)	Galesburg	Ah	0-17	5	63	26	10						SL		
		Bm1	17-29	7	69	27	4						FSL		
		Bm2	29-75	9	68	26	6						SL		
		(Bm1 + Bm2)	17-75					94	80	44	37	15		SM-SC	A-4(2)
		C	75+	6	71	22	7	94	81	41	35	15	SL	SM	A-2-4

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Table 1. continued

Association (Symbol)	Series	Horizon	Depth cm	Grav.	Mechanical Analysis: Total Percent Sand	Silt	Clay	% Passing Sieve #10	#40	#200	% Smaller than .05mm	.005mm	Soil Classification: CSSC Texture	UNIFIED	AASHO
REEVECRAIG (RE)	Reevecraig	Ap	0-19	3	72	22	6						VFSL		
		Bg	19-40	1	79	18	3						LFS		
		Cg	40+	0	83	14	3	99	98	66	46		LFS	SM	A-2-4
RIDEAU (R)	Ste. Rosalie	Ap	0-33	0	23	21	56						C		
		Bg1	33-41	0	12	21	67						HC		
		Bg2	41-74	0	16	16	68						HC		
		(Bg1 + Bg2)	33-74						100	97	95	76		CI	A-7-6(20)
		Cg1	74-89	0	6	49	45						SIC		
		Cg2	89+	0	16	16	68						HC		
		(Cg1 + Cg2)	74+						100	98	97	83		CI	A-7-6(17)
ST. THOMAS (ST)	Limoges	Ah	0-8	1	93	6	2						FS		
		Bm1	8-20	0	94	5	1						FS		
		Bm2	20-52	0	98	1	1						FS		
		C	52+	0	99	1	0	100	99	4			FS	SP	A-3

Table 2. Additional engineering test data for horizons of selected soils given in Table 1.

Association (Symbol)	Series	Horizon	Depth cm	Atterberg Limits LL	PL	PI	Bulk Dens. g/cm^3	Poro-sity %	Compaction Max. Dry Dens. $tonnes/m^3$	Opt. Moist. %	CBR Swell %	Shrink. Limit %	Cole Rod
BEARBROOK (B)	Bearbrook	Ap	0-16				1.07	49				35	0.15
		Bg1	16-31	56.0	20.5	35.5	1.39	46	1.6	24.9	1.1	8	0.21
		Bg2	31-48				1.39	46				4	0.15
		Bg3	48-55				1.41	45				11	0.16
		(Bg1 + Bg2)	31-55	51.5	19.0	32.5			1.6	24.9	0.5		
		BCg	55-80				1.25	50				33	0.22
		Ckg	80+	60.5	21.0	39.5	1.26	48	1.5	28.0	1.4	15	0.17
CASTOR (C)	Bainsville	Ap	0-22				1.30					29	0.03
		Bg1	22-37				1.49					26	
		Bg2	37-49				1.53						
		(Bg1 + Bg2)	22-49	N.P.	N.P.				1.8	15.8	0.1	25	0.02
		II Cg	49+				1.46		1.6	21.2	1.4	34	0.09
CHATEAUGUAY (CH)	MacDonald	Ap	0-22				1.12					19	0.10
		Bg	22-28				1.51					19	0.05
		Cg	28-45				1.58					11	0.07
		(Bg + Cg)	22-45	34.7	19.8	14.9			1.7	19.0	0.4		
		II Cg	45-54									18	0.03
		III Ckg	54+	15.4	13.1	2.3			2.3	5.2	0.8	17	0.01

Table 2. continued

Association (Symbol)	Series	Horizon	Depth cm	Atterberg Limits LL	PL	PI	Bulk Dens. g/cm^3	Porosity %	Compaction Max. Dry Dens. $tonnes/m^3$	Opt. Moist. %	CBR Swell %	Shrink. Limit %	Cole Rod
DALHOUSIE (D)	Brandon	Ap	0-25				1.21					16	0.07
		Bg1	25-45				1.49					23	0.10
		Bg2	45-69				1.36					29	0.10
		(Bg1 + Bg2)	25-69	48.9	20.3	28.6			1.6	22.9	0.8		
		Cg	69+	44.5	18.0	26.5	1.38		1.6	24.8	0.7	33	0.11
GRENVILLE (G)	Grenville	Ap1	0-19				1.13					15	0.03
		Ap2	19-35				1.41					17	0.03
		Ae	35-55				1.25					30	0.03
		Bt	55-77				1.35					20	0.02
		(Ae + Bt)	35-77	21.8	19.3	2.5			1.8	14.0	0.2		
		BC	77-92									14	0.04
		Ck	92+	16.6	14.2	2.4			2.1	9.8	-0.04	16	0.03
IRONSIDE (I)	Dwyer Hill	Ap	0-18				1.21					21	0.03
		Bmgj	18-31				1.00					23	
		Cg	31-52				1.40					23	
		(Bmgj + Cg)	18-52	N.P.	N.P.				1.8	14.5			
		II Ckg	52+	18.8	11.2	7.6			2.1	10.2	0.2	13	0.05

Table 2. continued

Association (Symbol)	Series	Horizon	Depth cm	Atterberg Limits LL	PL	PI	Bulk Dens. g/cm^3	Porosity %	Compaction Max. Dry Dens. tonnes/m^3	Compaction Opt. Moist. %	CBR Swell %	Shrink. Limit %	Cole Rod
JOCKVALE (J)	Vaudreuil	Ap	0-18				1.23					35	0.02
		Bg1	18-31				1.49					27	0.01
		Bg2	31-63				1.63					22	0.02
		Bg3	63-78				1.59					25	0.01
		(Bg2 + Bg3)	31-78	N.P.	N.P.				1.7	16.0	-0.18		
		Cg	78+	N.P.	N.P.		1.66		1.8	14.6		20	0.03
KARS (K)	Kars	Ap	0-22										
		Btj	22-30										
		Bm	30-57										
		Ck	57+	N.P.	N.P.				2.3	7.1			
MANOTICK (M)	Becketts Creek	Ap	0-25										
		Bm	25-34										
		C	34-43										
		II Cgj	43-50										
		III Cg	50+	18.5	17.0	1.5			2.3	8.3			
MILLE ISLE (MI)	Constance Bay	Ah	0-8										0.03
		Aej	8-10										
		Bm	10-24										0.01
		BC	24-60										0.00
		C	60+	N.P.	N.P.				1.7	15.7			0.00

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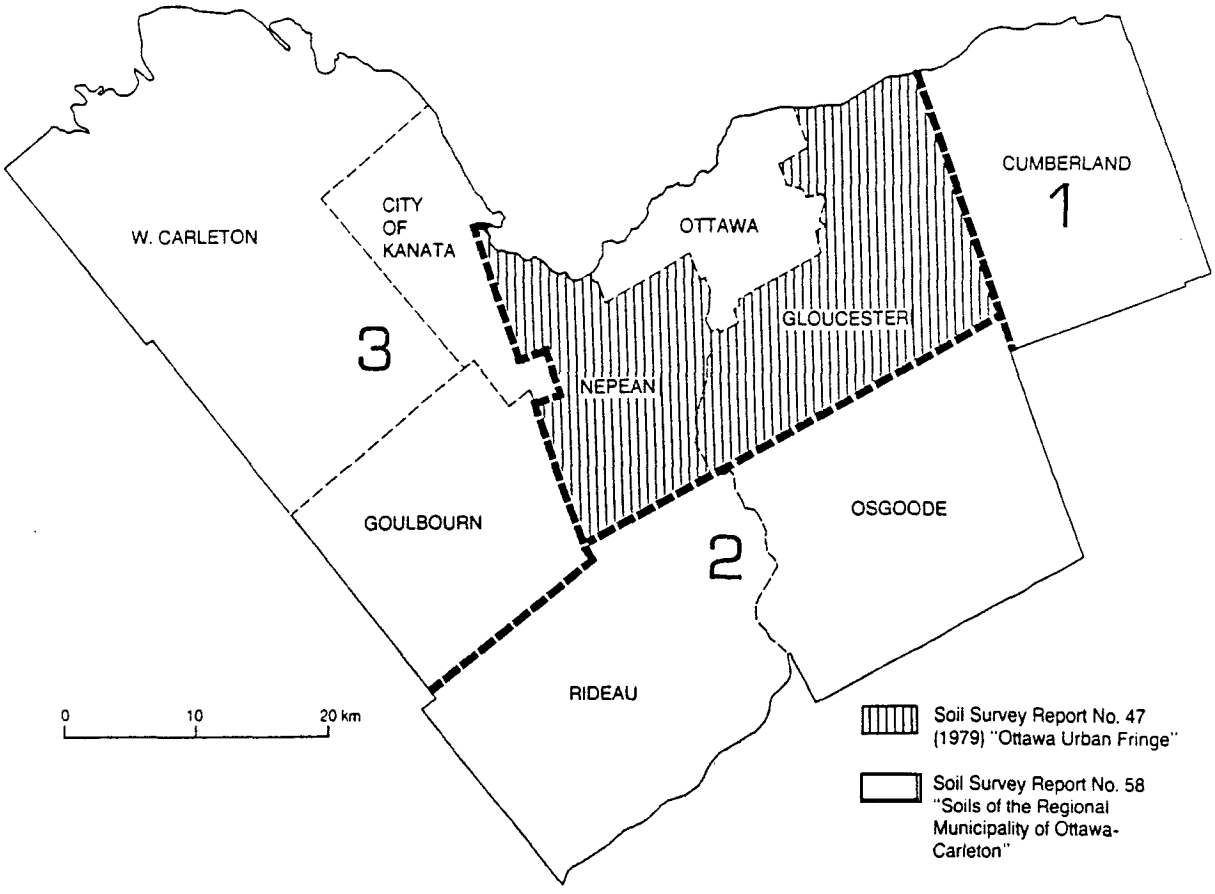
Table 2. continued

Association (Symbol)	Series	Horizon	Depth cm	Atterberg Limits LL	PL	PI	Bulk Dens. g/cm^3	Poro-sity %	Compaction Max. Dry Dens. $tonnes/m^3$	Opt. Moist. %	CBR Swell %	Shrink. Limit %	Cole Rod
NORTH GOWER (NG)	North Gower	Ap	0-20				1.30					19	0.08
		Bg1	20-31				1.62					18	0.03
		Bg2	31-51				1.59					19	0.07
		(Bg1 + Bg2)	20-51	34.5	16.9	17.6			1.8	17.6	0.7		
		Cg	51+	33.2	14.4	18.8	1.54		1.7	20.0	0.3	15	0.06
OKA (O)	Munster	Apk	0-18										0.09
		Btjk	18-33										0.09
		Bmk	33-50										0.05
		Ck	50+	N.P.	N.P.				2.2	8.2			0.00
OSGOODE (OS)	Osgoode	Ap	0-25				1.48	59				34	0.09
		Bg1	25-56	26.5	13.0	13.5	1.67	65	1.9	14.2	1.0	30	0.05
		Bg2	56-99	30.5	15.0	15.5	1.47	56	1.8	17.0	0.9	15	0.09
		Ckg	99+	29.0	14.0	15.0	1.52	57	1.8	17.8	0.2	15	0.07
QUEENSWAY (Q)	Galesburg	Ah	0-17				0.96					24	0.05
		Bm1	17-29				1.05					18	0.01
		Bm2	29-75				1.49					15	0.01
		(Bm1 + Bm2)	17-75	16.0	15.5	0.5			2.0	12.2	-0.1		
		C	75+	N.P.	N.P.		1.61		2.0	11.0		13	0.03

Table 2. *continued*

Association (Symbol)	Series	Horizon	Depth cm	Atterberg Limits LL	PL	PI	Bulk Dens. g/cm^3	Porosity %	Compaction Max. Dry Dens. $tonnes/m^3$	Opt. Moist. %	CBR Swell %	Shrink. Limit %	Cole Rod
REEVECRAIG (RE)	Reevecraig	Ap	0-19				1.15					26	0.02
		Bg	19-40				1.66					23	
		Cg	40+	N.P.	N.P.		1.68		1.8	13.5		31	0.03
RIDEAU (R)	Ste. Rosalie	Ap	0-33				0.73	67				18	0.15
		Bg1	33-41				1.21	53				31	0.11
		Bg2	41-74				1.34	46				30	0.20
		(Bg1 + Bg2)	33-74	58.5	22.5	36.0			1.5	27.9	1.0		
		Cg1	74-89				1.57	39				27	0.14
		Cg2	89+				1.32	48				35	0.15
		(Cg1 + Cg2)	74+	53.0	20.0	33.0			1.5	29.8	0.9		
ST. THOMAS (ST)	Limoges	Ah	0-8				1.11						0.00
		Bm1	8-20				1.39					23	0.01
		Bm2	20-52				1.49						0.01
		C	52+	N.P.	N.P.		1.59		1.6	17.8			0.00

SOIL MAP INDEX



REFERENCES

1. McKeague, J.A., Ed. 1978. "Manual on soil sampling and methods of analysis." Canada Soil Survey Committee, Canadian Society of Soil Science.

2. Dreimanis, A. 1962. "Quantitative gasometric determination of calcite and dolomite by using Chittick apparatus." Journal of Sedimentary Petrology. 30: 520-529.

3. U.S. Salinity Lab., Soil and Water Conservation Research Division, ARS, United States Department of Agriculture. 1964. "Elimination of Boundary Flow Errors in Laboratory Hydraulic Conductivity Measurements." Soil Science Society of America Proc. 28: 713-714.

4. Shafer, W.M. and M.J. Singer. 1976b. "A new method of measuring shrink-swell potential using soil pastes." Soil Science Society of America Proc. 40: 805-806.

5. American Society for Testing and Materials. 1976. 1976 Annual Book of ASTM Standards, Part 19.