The Soils of Brant County

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THE SOILS OF BRANT COUNTY

VOLUME 2

REPORT NO. 55

OF
THE ONTARIO INSTITUTE OF PEDOLOGY*

by

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*The Ontario Institute of Pedology serves as a coordinating body between three member agencies working in the areas of soil inventory, interpretation and research. It is made up of components of the Land Resource Research Centre 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.

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INTRODUCTION

The Soils of Brant County, Volume 2, consists mainly of detailed morphological, chemical and physical descriptions of typical soils of Brant County. In addition, there are tables of statistical means and engineering test data. The analytical methods used to obtain chemical, physical and engineering test data are also briefly outlined.

Volume 1 contains descriptions of the environmental setting of the soils, generalized descriptions of the soils, and soil interpretations.

HOW TO USE THE SOIL MAPS AND REPORT

Resource managers, such as farmers or foresters, usually know the characteristics and variations of soils on their own properties or in the immediate vicinity. However, without a soil map and report, comparison with other soils in the region is very difficult. With the help of a soil map, regional similarities and differences between soils can be shown. This can be an aid in buying or renting land, or in transferring management techniques to similar soils, in order to reduce the risks of managing new land.

To use the soil maps and report most efficiently, the following procedure is suggested:

(1) Locate the area of interest on the soil map index found at the back of Volume 1 of the soils report. Note the number of the soil map on which your area of interest is located.

(2) Obtain the appropriate soil map, and locate your specific area of interest. Natural and cultural features on the map, such as streams, contours, roads, buildings, lots and concessions should assist in location.

(3) Note the map unit symbols within the map unit delineations that occur in your area of interest.

(4) Consult the legend on the map to aid in understanding the symbol and determining the soil components, their slopes, parent materials and drainage.

(5) If more information is required on the soil components, locate them by name in Volume 1 of the report. A generalized description of each soil is presented in Volume 1, along with comments on land use and associated soils.

(6) For specific interpretations, refer also to Volume 1. It contains soil capabilities for common agricultural field crops, soil suitability for special agricultural and horticultural crops, and soil erosion interpretations.

(7) For engineering test data and detailed soil profile descriptions, with associated chemical and physical analyses, users are referred to Volume 2.

Users should understand that each soil exhibits a range of properties, so that boundaries between different soils, even though they represent the best estimate of where soils change, may only be approximately located. Also, because of the map scale and the nature of the soil mapping, there could be inclusions within any map unit, up to several hectares, of unidentified soil components. Most soils information is based on the examination of soil characteristics to a depth of about 100 cm below the surface.

ACKNOWLEDGEMENTS

Individuals involved in the detailed descriptions, statistical and laboratory analyses of the Brant County soils, have been acknowledged in Volume 1. All laboratory analyses, except for the engineering test data was provided by the Agriculture Canada laboratory, located at the Department of Land Resource Science, University of Guelph, Guelph.

Engineering test data were provided by the Soils and Aggregates Section laboratory of the Highway Engineering Division of the Ontario Ministry of Transportation, under the supervision of Mr. Al Hanks.

The efforts of C.A. Fitzgibbon and C.J. Palmer for the preparation of the tables and data management and D.E. Irvine and J.A. McLennan for the graphical design and layout of Volume 2 are gratefully acknowledged.

ANALYTICAL METHODS AND DETAILED SOIL DESCRIPTIONS

A. Analytical Methods

Most of the methods used for soil analyses are outlined in the Manual on Soil Sampling and Methods of Analysis (1). The appropriate section numbers in that manual are indicated in parentheses after the soil analyses, as follows: particle size analysis by pipette method, after pretreatment with hydrogen peroxide and calgon (2.11); bulk density by core method (2.21); water retention by pressure plate extraction (2.43); pH $CaCl_2$ (3.11); pH water (3.13); organic carbon by wet oxidation, using ortho-phenanthroline-ferrous sulfate as indicator (3.613); calcium carbonate equivalent, using 6N HCl and some glassware modifications (3.41). Rubbed fibre content of organic soils was determined from guidelines outlined in the CANSIS Manual for Describing Soils in the Field (4).

Engineering test data for most of the major soils of the region are provided in Table 1. Data is presented only for those soil horizons of significance to engineering uses. Many of the soils listed in Table 1 were analyzed by the Soils and Aggregates Section Lab., Highway Engineering Division, Ontario Ministry of Transportation, Toronto, using ASTM (2) methods. The test procedures and their ASTM numbers are as follows:

Unified classification	-D2487-69
Atterberg limits	-D423-4-72
Grain size analysis	-D422-72
Maximum dry density and percent optimum moisture	-D698-70

B. Detailed Soil Description and Analyses

The format used to characterize each selected soil, is to provide a generalized summary of soil parent materials, drainage and classification, followed by a table of mean horizon values. The mean values were obtained from laboratory analyses of all soil horizons that were sampled.

Following this generalized soil information are detailed soil profile descriptions where available, of typical profiles. The taxonomic classifications and nomenclature used for typical profile descriptions were those of the Canadian System of Soil Classification (3). Criteria for texture, structure, consistence and mottles are from the CanSIS Manual (4). In addition to site and horizon properties, tables of chemical and physical properties of soil horizons are given for each typical soil profile.

The definitions of soil texture abbreviations used in the tables, are as follows:

GR - Gravel
GL - Gravelly loam
GS - Gravelly sand
CS - Coarse sand
S - Sand
FS - Fine sand
VFS - Very fine sand
LS - Loamy sand
LFS - Loamy fine sand
LVFS - Loamy very fine sand
CSL - Coarse sandy loam
SL - Sandy loam
FSL - Fine sandy loam
VFSL - Very fine sandy loam
L - Loam
SIL - Silt loam
SCL - Sandy clay loam
FSCL - Fine sandy clay loam
CL - Clay loam
SICL - Silty clay loam
SC - Sandy clay
SIC - Silty clay
C - Clay
HC - Heavy clay
ORG - Organics

Table 1. Engineering Test Data for Horizons of Selected Soils from Brant County

Soil	Horizon	Depth cm	Soil Texture	Unified Soil Class.	Atterberg Limit LL	Atterberg Limit PL	Atterberg Limit PI	Mechanical Analysis % Passing #4	#10	#40	#200	% Smaller than .05mm	.005mm	.002mm	Compaction Max.Dry Density (PCF)	Opt. Moist. (%)	Dominant Clay Mineral
Ayr	Bg	23-50	CSL	SM-SC	34	21	13	100	100	80	45	40	20	16	120	13	
(AYR)	2Ckg	76-100	GS	GP(SM-SC)	NP	NP		100	100	55	11	9	6	4	127	13	
Berrien	Btgj	28-36	LS					94	93	89	21	12	6	5	120	10	
(BRR)	Ckg	36-58	SL	CL-ML	20	14	6	93	92	87	31	26	9	7			
	2Ckg	58-100	SICL	CL	26	17	9	98	96	95	89	84	39	25	117	15	
Beverly	Btgj	18-63	SIC	ML	31	24	7	100	100	98	94	93	53	27	102	23	
(BVY)	Ckg	72-100	SICL	CL	31	22	9	100	100	98	97	96	55	23	106	21	
Bookton	Bm	13-55	LS	SM-SC	16	13	29	100	100	99	20	11	4	3	108	14	
(BOO)	2Bt	55-66	SICL	ML	39	25	14	100	100	100	92	89	52	32	106	20	Vermiculite
	2Ck	66-85	SICL	CL	33	18	15	100	100	100	90	85	50	27	113	18	Illite
Brady	Bmgj	8-18	LS	SP-SM	NP	NP		99	98	82	13	10	5	4			
(BAY)	Btgj	18-26	SL	SM	NP	NP		100	99	85	16	13	8	7	121	13	
	Ckg	31-38	LS	SP	NP	NP		100	99	86	3	4	2	1	110	16	
Brant	Bm	18-43	SIL	CL	28	20	8	100	100	99	95	86	25	13			Vermiculite
(BRT)	Bt1	43-64	SIL	CL	29	21	8	100	100	99	93	85	22	14			Vermiculite
	Bt2	64-74	SIL	CL	30	20	10	100	100	100	95	85	21	12			
	Ck	74-100	SIL	ML	22	20	2	100	100	100	97	87	17	8	113	15	Illite
Brantford	Bm	13-28	SIL	ML	38	25	13	100	100	100	98	97	37	19			Vermiculite
(BFO)	Bt	28-56	SIC	CH	60	27	34	100	100	100	99	98	80	49			Illite
	Ck	56-100	SIC	OL	41	27	14	100	99	99	97	96	76	45			Illite
Burford	Bm	18-33	SIL	CL-ML	24	19	5	100	100	90	70	61	20	12			
(BUF)	2Bt	33-50	GCL	CL	35	20	15	100	100	88	68	62	40	36			
	2Ck	50-90	GS	GP	NP	NP		100	100	50	17	16	8	6	137	9	
Burford Coarse	Bm	15-36	GSL		NP	NP		86	78	63	37	32	9	5			
Phase (BUF.C)	Ct	36-116	GSL	CL-ML	27	20	7	85	80	64	35	30	12	9			
	Ck	116+	GSL	ML	18	17	1	58	49	30	14	11	4	3	137	9	
Caledon	Bm	23-48	SL	SM-SC				100	100	95	50	41	14	8	125	10	
(CAD)	2Bt	48-70	SCL-GSL	CL	37	19	18	100	100	80	53	48	32	29	126	12	
	2Ck	70-100	GS	SP	NP	NP		100	100	35	7	6	5	4	134	12	
Camilla	Bmgj	30-45	FSL	CL	22	12	11	100	99	94	48	40	15	12			
(CML)	2Btg	45-55	SL	CL	25	18	8	99	98	90	51	48	18	16			
	2Ckg	55-84	GSL	SP(SM-SC)	NP	NP		100	100	70	37	34	15	10			
Colwood	Bg	15-28	SIL	CL-ML	27	22	5	100	100	100	96	91	12	8	109	16	
(CWO)	Ckg	28-70	SIL	CL-ML	26	21	5	100	99	98	95	89	11	4	107	18	

Soil	Horizon	Depth cm	Soil Texture	Unified Soil Class.	LL	Atterberg Limit PL	PI	Mechanical Analysis % Passing #4	#10	#40	#200	% Smaller than .05mm	.005mm	.002mm	Compaction Max.Dry Density (PCF)	Opt. Moist. (%)	Dominant Clay Mineral
Conestogo (CTG)	Bm	30-48	L	CL-ML	24	17	7	100	98	95	67	55	17	14			Vermiculite
	Btgj	48-65	SIL	CL-ML	19	14	5	99	94	94	57	47	18	15			Vermiculite
	2Ckg	65-90	SIL	CL-ML	20	14	6	100	99	93	74	68	26	14			Illite
Dumfries (DUF)	Bm	30-40	SIL	CL	28	19	9	69	68	64	49	41	19	15	126	12	
	Ck	123+	GSL	GW(GM-GC)	NP	NP		34	30	22	11	8	2	2	141	7	
Fox (FOX)	Bm	18-76	SL	SM-SC				100	100	94	36	30	9	7	125	10	
	Bt	76-94	SL	SM-SC				100	98	85	22	20	15	13			
	Ck	94-115	S	SP(SM-SG)	NP	NP		99	98	80	6	5	4	3			
Gilford (GFD)	2BC	20-45	GL	CL-ML	23	18	5	100	100	80	55	50	18	13	130	11	
	3Ckg	45-61	GS	GM-GC				100	100	67	32	27		4	143	7	
	4Ckg	61-90	S	SP	NP	NP		100	100	57	4	4	3	3	118	16	
Gobles (GOB)	Bm	23-33	CL	CL	31	19	12	100	100	93	70	62	30	19			
	Btgj	33-53	SICL	CL	38	19	19	100	100	97	82	78	45	32	112	17	Illite
	Ckgj	53-100	SICL	CL	31	19	12	97	97	93	81	76	40	25	119	15	Illite
Granby (GNY)	Btgj	20-36	FS	ML	20	18	2	100	99	90	27	24	10	7	119	14	
	Ckg	90-105	FS	SP-SM	NP	NP		98	97	60	4	3	2	2	109	14	
Guelph (GUP)	Bm	18-33	SIL	CL	27	18	9	100	100	95	79	72	25	16			Vermiculite
	Bt	33-61	CL	CL	37	19	18	100	98	97	85	80	42	29	108	19	Illite
	Ck	61-100	SIL	CL	24	16	8	100	100	95	80	75	26	17	122	13	Illite
Haldimand (HIM)	Bmgj	13-28	SIC	OL	41	25	16	100	100	98	97	97	74	47			Illite
	Bt	28-54	SIC	OL	48	29	20	100	100	100	97	97	77	57	102	23	Illite
	Ckg	54-90	HC	CH	53	25	28	100	100	100	99	97	90	82	102	23	Illite
Heidelberg (HIG)	Bmgj	20-45	VFSL		NP	NP		100	100	100	51	28	7	6			
	Btgj	45-71	VFSL		NP	NP		100	100	100	59	28	5	5	106	15	
	Ckg	71-100	VFLS		NP	NP		100	100	100	56	24	2	1	102	18	
Kelvin (KVN)	Bg	23-58	SIC	CL	42	23	19	100	100	97	90	88	60	47	113	17	
	Ckg	58-90	SIC	CL	33	20	13	100	100	96	83	77	47	41	121	13	
Maryhill (MYL)	Bmg	28-46	L	CL	28	19	9	99	99	97	82	74	24	15			
	2Btg	64-76	L	CL	30	20	10	100	99	96	78	77	41	28			
	2Ckg	76-100	L	CL	27	19	8	99	99	95	76	69	26	17	116	15	
Muriel (MUI)	Bm	18-33	SIL	ML	29	22	7		100	98	86	78	27				Vermiculite
	Bt	33-78	SICL	CL	35	21	14			98	92	89	45	30	107	21	Illite
	Ck	78-90	SICL	CL	30	18	12		95	93	85	80	38				Illite

Table 1. Engineering Test Data Cont'd

Soil	Horizon	Depth cm	Soil Texture	Unified Soil Class.	Atterberg Limit LL	Atterberg Limit PL	Atterberg Limit PI	Mechanical Analysis % Passing #4	% Passing #10	% Passing #40	% Passing #200	% Smaller than .05mm	% Smaller than .005mm	% Smaller than .002mm	Compaction Max.Dry Density (PCF)	Opt. Moist. (%)	Dominant Clay Mineral
Oakland (OKL)	Btgj	36-46	LS		NP	NP		94	94	89	20	17	6	5	120	10	
	Ckgj	46-59	SL	CL-ML	20	14	6	93	92	86	31	26	9	6			
	2Ckg	59-100	SICL	CL	26	17	9	98	96	95	89	84	39	25	117	15	
Plainfield (PFD)	Bm	15-70	S	SP(SM-SC)	NP	NP		100	100	92	7	6	3	2	116	11	
	Bmgj	70-120	S	SP	NP	NP		100	100	90	5	4	4	4	112	14	
Smithville (SHV)	Bm	15-28	SIC	OL	42	29	13	100	100	100	100	97	70	47			Illite
	Bt2	43-56	HC	CH	66	29	37	100	100	100	100	100	87	70			Illite
	Ck	56-100	HC	CH	57	29	28	100	100	100	99	98	87	70	102	23	Illite
Scotland (STD)	Bm	23-44	FSL	SM				92	92	86	40	32	10	9			Vermiculite
	Bt	44-64	SL	CL-ML	20	14	6	99	98	96	50	40	16	10	123	12	Illite
	2Ck	64-100	L	CL-ML	20	15	5	92	90	85	60	55	22	13			Illite
Teeswater (TEW)	Bm	13-36	SIL	ML	21	18	3	100	100	97	80	74	17	11	118	12	Vermiculite
	Bt	36-50	CL	CL	33	19	15	100	100	90	67	60	30	24			Illite
	2Ck	50-100	GLS	GP				100	100	58	30	22	9	7			Illite
Toledo (TLD)	Bg	20-41	CL	CL	47	23	24	100	100	100	97	95	60	40	109	18	Illite
	Ckg	41-100	CL	CL	43	22	21	100	100	96	94	92	67	53	108	19	Illite
Tuscola (TUC)	Bmgj	18-28	SIL	ML	21	18	3	100	100	97	85	67	17	13			
	Btgj1	28-48	SIL	CL	25	16	8	100	96	92	69	60	20	17			
	Btgj2	48-60	CL	CL	27	18	9	100	97	94	79	68	21				
	Ckgj	60-90	L	CL				100	99	97	78	61		8	110	15	
Vanessa (VSS)	Bg	20-28	LS		NP	NP		100	100	97	26	15	4	3			
	Btg	28-58	SL	ML	22	18	4	98	98	95	35	25	13	10	125	11	
	2Ckg	66-100	L	CL	25	17	8	93	91	87	68	62	26	14			
Walsingham (WAM)	Bm	10-33	S	SP-SM	NP	NP		98	96	80	10	9	5	3	113	13	
	Bmgj	33-89	S	SM-SC	NP	NP		100	98	80	10	7	5	4	116	12	
	Ck	89-126	MS	SM-SC	NP	NP		100	100	75	6	5	3	2	109	14	
Waterloo (WTO)	Bm	10-43	FLS		NP	NP			100	97	30	16	3	2	112	11	
	Bt	43-64	FSL	ML	17	15	2		100	100	41	29	14	10	120	11	
	Ck	64-100	FS		NP	NP			100	98	17	13	2	2	110	13	
Wauseon (WUS)	Bg	23-46	LS	SM-SC				100	99	97	22	15	9	8	117	13	
	2Btg	46-71	CL	CL	30	17	13	100	98	96	75	70	35	28	116	15	
	2Ckg	71-97	L	CL	23	14	9	100	100	88	69	63	31	23			

Table 1. Engineering Test Data Cont'd

Soil	Horizon	Depth cm	Soil Texture	Unified Soil Class.	LL	Atterberg Limit PL	PI	Mechanical Analysis % Passing #4	#10	#40	#200	% Smaller than .05mm	.005mm	.002mm	Compaction Max.Dry Density (PCF)	Opt. Moist. (%)	Dominant Clay Mineral
Woolwich	Bm	20-43	SIL	CL-ML	24	18	6	99	98	97	77	71	20	13			Vermiculite
(WOW)	Bt1	43-58	SIL	CL	25	18	7	100	99	97	76	68	20	15			Vermiculite
	Bt2	58-74	SIL	ML	19	17	2	98	97	94	76	66	22	15	117	15	Vermiculite
	2Ck	74-100	SIL	CL-ML	22	16	6	100	100	93	75	68	22	12	129	10	Illite

Note: Data is not presented for all horizons of the soil profile. Only those horizons which are of major importance to engineering uses have been sampled and analyzed for engineering properties.

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Mainly coarse textured sandy or gravelly floodplain deposits.
DRAINAGE	Variable
USUAL CLASSIFICATION	Variable

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1)2-ALU PROFILE NO. 744

LOCATION	Brantford Township, Lot 13, Con. III, NTS Map Area 40P/1f, 17TNT 5522 7774.
ELEVATION	213 metres
SITE	Idle land adjacent to Whitemans Creek
LANDFORM AND PARENT MATERIALS	Nearly level floodplain sand and loamy sand textures.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity high, saturation period prolonged.
STONINESS	Nonstony
CLASSIFICATION	Rego Humic Gleysol, sandy, mixed, neutral, strongly calcareous.
STATUS	Undecided

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ahkg	0-18	10YR5/4m	SL	weak, coarse, blocky		friable	common, 10YR5/8m
Ckg1	18-35	10YR5/2m	LS	weak, coarse, blocky		loose	common, 5YR4/4m
Ckg2	35-52	10YR5/2m	LS	weak, coarse, blocky		loose	common, 5YR4/4m
Ckg3	52-80	10YR5/2m	LS	weak, coarse, blocky		loose	many, 5YR4/4m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ahkg	0-18	0	72	23	5	7.2	2.9	14.9
Ckg1	18-35	0	87	9	4	7.2	0.9	13.8
Ckg2	35-52	0	88	8	4	7.3	0.3	14.2
Ckg3	52-80	0	83	12	4	7.3	0.7	12.8

(2)2-ALU.C PROFILE NO. 746

LOCATION	Brantford Township (Brant Park GRCA), Lot 26, Con. III, NTS Map Area 40P/1f, 17TNT 5572 7780.
ELEVATION	210 metres
SITE	Recreational area
LANDFORM AND PARENT MATERIALS	Level floodplain, variable textures overlying coarse gravel and cobbles.
SLOPE	0%
SOIL WATER REGIME	Well drained, conductivity very rapid, saturation period very short.
STONINESS	Nonstony
CLASSIFICATION	Orthic Melanic Brunisol, coarse loamy over fragmental, mixed, alkaline, strongly calcareous.
STATUS	Undecided

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ahk	0-20	10YR2/2m	FSL	weak, medium, granular		friable	
Bm	20-43	10YR3/3m	FSL	weak, coarse, blocky	weak, medium, granular	friable	
Ck	43-51	10YR5/4m	MLS	weak, coarse, blocky	structureless		
2Ck	51-81	10YR5/4m	GLS	structureless			

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ahk	0-20	0	46	38	16	6.9	4.8	12.3
Bm	20-43	0	65	24	11	7.1	1.6	0.9
Ck	43-51	0	76	18	6	7.2	1.2	20.7
2Ck	51-81	70	80	16	4	7.2	0.7	25.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Mainly medium textured loamy floodplain deposits.

DRAINAGE Variable

USUAL CLASSIFICATION Variable

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH in $CaCl_2$	$CaCO_3$ %
Ahk	4	24	0	32	48	20	L	4.8	7.2	8.2
Bmgj	3	59	0	38	48	14	L	2.2	7.3	0.1
Ckg	4		0	39	45	16	L	1.6	7.3	6.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1)3-ALU PROFILE NO. 713

LOCATION Burford Township, Lot 7, Con. VI, NTS Map Area 40P/1d, 17TNT.5445 7722.

ELEVATION 253 metres

SITE Idle land adjacent to tributary of Horner Creek

LANDFORM AND PARENT MATERIALS Nearly level floodplain, loamy and silty textures.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity moderate, saturation period medium.

STONINESS Nonstony

CLASSIFICATION Gleyed Melanic Brunisol, coarse loamy, mixed, neutral, weakly calcareous.

STATUS Undecided

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-17	10YR3.5/2m	L	weak, fine, granular		friable	
Bm1	17-43	10YR3/3m	L	weak, medium, blocky	weak, fine, granular	friable	
Bm2	43-58	10YR3/2.5m	SIL	moderate, medium, granular		friable	
Bmgj	58-76	10YR5/4m	L	moderate, coarse, blocky		firm	fine, prominent, 10YR5/8m
2Bmgj	76-100	10YR5/4m	LS	weak, medium, blocky		friable	common, prominent, 10YR5/8m
3Ckg	100+	10YR5/3m	VFSL	massive		firm	many, prominent, medium 10YR5/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-17	0	51	31	18	7.1	5.3	0.7
Bm1	17-43	0	44	42	14	7.5	2.4	0.1
Bm2	43-58	0	30	57	13	7.3	2.7	0.1
Bmgj	58-76	0	40	44	16	7.3	1.6	0.1
2Bmgj	76-100	0	77	17	6	7.4	2.2	1.9
3Ckg	100+		61	29	9	7.5	0.4	5.3

(2)3-ALU PROFILE NO. 731

LOCATION	Brantford Township (City of Brantford,Off Birkett Lane), NTS Map Area 40P/1c, 17TNT 5604 7732.
ELEVATION	180 metres
SITE	Cultivated field, York Farms
LANDFORM AND PARENT MATERIALS	Gently sloping floodplain, loam and very fine sandy loam textures.
SLOPE	3%
SOIL WATER REGIME	Imperfectly drained, conductivity medium, saturation period moderately short.
STONINESS	Nonstony
CLASSIFICATION	Gleyed Humic Regosol, coarse loamy, mixed, neutral, strongly calcareous.
STATUS	Undecided

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Apk	0-23	10YR3/2m	L	weak, medium, granular		friable	
Ckgj	23-45	10YR3/2.5m	SL	weak, coarse, blocky	weak, fine, granular	friable	prominent 10YR7/3m
Ck1	45-66	10YR3/2m	L	weak, coarse, blocky	weak, fine, granular	friable	
Ck2	66-82	10YR3/2m	SL	coarse, blocky	weak, fine, granular	friable	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Apk	0-23	0	42	44	14	7.4	3.6	17.5
Ckgj	23-45	0	58	31	11	7.4	2.0	18.0
Ck1	45-66	0	43	43	14	7.2	3.4	16.8
Ck2	66-82	0	55	33	12	7.2	3.0	17.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL · Mainly fine textured clayey floodplain deposits.

DRAINAGE Variable

USUAL CLASSIFICATION Variable

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

4-ALU PROFILE NO. 704-1-1

LOCATION	Brantford Township (Range West of Mt. Pleasant Rd.), Lot 1, Con. III, NTS Map Area 40P/1c, 17TNT 5596 7656.
ELEVATION	223 metres
SITE	Unimproved pasture
LANDFORM AND PARENT MATERIALS	Level floodplain, silty clay loam and silty clay textures.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity low, saturation period prolonged.
STONINESS ·	Nonstony
CLASSIFICATION	Rego Humic Gleysol, fine silty, mixed, alkaline, strongly calcareous.
STATUS	Undecided

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah1	0-10	10YR3/2m	SIL	medium, subangular blocky		friable	
Ah2	10-23	10YR2/1m	SIC	massive		friable	
Cg	23-50	5Y4/1m	SIC	weak, coarse, prismatic		very firm	abundant, prominent, 7.5YR4/4 and 5/6

Remarks: No physical or chemical data available.

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	40 to 100 cm sandy textures over fluvial gravelly sand and gravel.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

AYR PROFILE NO. P23-1

LOCATION	Burford Township, Lot 6, Con. X, NTS Map Area 40P/1d, 17TNT 5462 7675.
ELEVATION	253 metres
SITE	Road ditch
LANDFORM AND PARENT MATERIALS	Nearly level fluvial plain consisting of sandy veneer over gravelly sand and gravel textures.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity moderately rapid, saturation period prolonged.
STONINESS	Nonstony
CLASSIFICATION	Orthic Humic Gleysol, coarse loamy over fragmental, mixed, alkaline, strongly calcareous.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-23	10YR2/2m	FSL	moderate, medium, granular		friable	
Bg	23-50	2.5Y5/4m	CSL	moderate, medium, subangular blocky		friable	many, prominent, 7.5YR5/6m
BC	50-76	2.5Y5/4m	CSL	weak, coarse, subangular blocky		friable	many, prominent, 7.5YR5/8m
2Ckg	76-103	10YR5/2m	GS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-23	0	53	33	14	7.3	6.4	1.3
Bg	23-50	0	53	30	17	7.5	0.8	2.2
BC	50-76	8	61	32	7	7.6	0.9	24.3
2Ckg	76-103	22	90	2	8	7.6	0.0	28.2

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL — 40 to 100 cm sandy textures over silty clay loam or silty clay lacustrine.

DRAINAGE — Imperfectly drained

USUAL CLASSIFICATION — Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ap	2	22	0	57	31	12	SL	2.1	6.5	0.1
Bmgj	2	42	0	47	41	12	L	0.6	6.6	0.0
2Btgj	3	65	0	21	40	39	CL	0.6	6.8	0.0
2Ckg	2		0	4	50	46	SIC	0.4	7.5	10.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

BRR PROFILE NO. 171-1-1

LOCATION — Brantford Township, Lot 9, Con. III, NTS Map Area 40P/1c, 17TNT 5600 7687.

ELEVATION — 226 metres

SITE — Cultivated field

LANDFORM AND PARENT MATERIALS — Gently undulating lacustrine plain with 40 to 100 cm sandy textures over silty clay sediments.

SLOPE — 3%

SOIL WATER REGIME — Imperfectly drained, conductivity rapid in sand, low in clayey subsoil, saturation period medium.

STONINESS — Nonstony

CLASSIFICATION — Gleyed Brunisolic Gray Brown Luvisol, coarse loamy over clayey, mixed, alkaline, strongly calcareous.

S
TATUS — Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-18	10YR3/1.5m	FSL	weak, medium granular		friable	
Bmgj	18-48	10YR5/4m	SL	weak, medium, subangular blocky		friable	common, 10YR6/6
2Btgj	48-74	2.5YR5/2m	SIC	medium, angular blocky		very firm	common, 7.5YR5/4
2Ckg	74-97	10YR5/3m	SIC	coarse, angular blocky		hard	5Y6/1m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ap	0-18	0	74	18	8	6.4	3.5	0.1
Bmgj	18-48	0	58	32	10	6.4	0.6	0.0
2Btgj	48-74	0	4	44	51	6.9	0.7	0.0
2Ckg	74-97	0	1	46	53	7.5	0.4	11.4

BEVERLY SOIL (BVY)

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Lacustrine sediments mainly composed of silty clay loam and silty clay textures.

DRAINAGE Imperfect drainage

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ap	5	21	0	6	59	35	SICL	5.4	6.9	0.6
Bmgj	4	51	0	4	60	36	SICL	0.8	7.1	0.8
Btgj	5	62	0	5	56	39	SICL	0.7	7.1	0.3
Ckg	6		0	2	63	35	SICL	0.3	7.6	11.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

BVY PROFILE NO. P474

LOCATION Brantford Township (Range East of Mt. Pleasant Rd.), Lot 1, Con. III, NTS Map Area 40P/1c, 17TNT 5611 7648.

ELEVATION 226 metres

SITE Road ditch

LANDFORM AND PARENT MATERIALS Nearly level lacustrine plain, consisting of silty clay loam and silty clay textures.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity low, saturation period medium.

STONINESS Nonstony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, clayey, mixed, neutral, strongly calcareous.

S
TATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3/2m	SICL	moderate, medium, granular		firm	
AB	13-18	10YR6/2m, 10YR4/2m	SICL	medium, subangular blocky	strong, medium granular	firm	
Btgj	18-63	10YR3.5/2m	SIC	strong, medium, angular blocky		very firm	common, faint, 10YR4/4, and prominent, 10YR6/6m
BC	63-72	10YR5/2m	SIC	strong, coarse, angular blocky		very firm	common, prominent 10YR5/6
Ckg	72+	5Y6/1m	SICL	coarse angular blocky		very firm	common, prominent, 10YR7/6m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	8	54	38	6.9	8.5	0.7
AB	13-18	0	5	56	39	6.8	4.0	0.1
Btgj	18-63	0	3	53	44	7.0	0.7	0.1
BC	63-72	0	2	57	40	7.2	0.4	1.4
Ckg	72-100	0	1	65	33	7.3	0.4	21.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	40 to 100 cm sandy textures over silty clay loam or silty clay lacustrine or glacial till deposits.
DRAINAGE	Well drained
USUAL CLASSIFICATION	Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	23	0	68	21	11	SL	3.1	7.2	0.5
Bm	6	41	0	83	13	4	LS	0.6	7.0	0.0
2Bt	8	74	0	11	58	31	SICL	0.5	7.4	3.3
2Ck	7		1	8	65	27	SICL	0.2	7.6	20.3

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1)BOO PROFILE NO. P173-2

LOCATION	Brantford Township (Range East of Mt. Pleasant Rd.), Lot 1, Con. III, NTS Map Area 40P/1c, 17TNT 5594 7657.
ELEVATION	229 metres
SITE	Road ditch
LANDFORM AND PARENT MATERIALS	Gently undulating dissected lacustrine plain with 40 to 100 cm sandy textures over silty clay loam or silty clay textures.
SLOPE	3%
SOIL WATER REGIME	Moderately well drained, conductivity moderately rapid in sand, low in clayey subsoil, saturation period moderately short.
STONINESS	Nonstony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, sandy over fine silty, mixed, alkaline, strongly calcareous.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3/2m	FLS	weak, medium, granular		loose	
Bm1	13-23	10YR4/4m	FLS	weak, medium, subangular blocky		friable	
Bm2	23-35	10YR5/5m	FS	weak, coarse, angular blocky		friable	
Bmgj	35-55	10YR4/4m	FS	weak, medium, angular blocky		friable	common, 7.5YR4/4m
2Bt	55-66	10YR4/2m	SICL	moderate, medium, subangular blocky		very firm	
2Ck	66-85	2.5Y5/2m	SICL	prismatic	coarse, pseudo-blocky	extremely firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	78	15	7	7.4	2.5	0.9
Bm1	13-23	0	84	12	4	7.2	1.2	0.0
Bm2	23-35	0	90	6	4	7.0	0.5	0.0
Bmg	35-55	0	92	7	1	6.8	0.1	0.0
2Bt	55-66	0	9	59	32	7.5	0.4	0.4
2Ck	66-85	0	3	70	27	7.7	0.2	20.6

(2)BOO.T PROFILE NO. P173-1

LOCATION	Burford Township, Lot 24, Con. III, NTS Map Area 40P/2a, 17TNT 5328 7738.
ELEVATION	283 metres
SITE	Road ditch
LANDFORM AND PARENT MATERIALS	Gently undulating veneered till plain with 40 to 100 cm sandy textures over silty clay loam till.
SLOPE	3%
SOIL WATER REGIME	Moderately well drained, conductivity moderately rapid in sand, low in clayey subsoil, saturation period moderately short.
STONINESS	
CLASSIFICATION	Brunisolic Gray Brown Luvisol, loamy, mixed, alkaline, strongly calcareous.
STATUS	Variant, till substrate phase. 2Ck horizon is lower in clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-28	10YR3/2m	FSL	weak, medium, granular		friable	
Bm	28-38	10YR5/4m	FSL	medium, subangular blocky	medium granular	friable	
2Bt1	38-48	10YR6/4m, 10YR4/3m	L	medium, subangular		firm	
2Bt2	48-79	10YR3/3m	SICL	strong, medium, angular blocky		very firm	
2Ckg	79-91	10YR4.5/2m	SIL	coarse, psuedo-blocky		very firm	few, prominent 10YR6/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-28	0	65	23	12	7.4	3.5	0.9
Bm	28-38	0	70	26	4	7.3	1.3	0.1
2Bt1	38-48	0	49	32	19	7.3	0.6	0.0
2Bt2	48-79	2	11	60	29	7.4	0.5	0.0
2Ckg	79-91	3	17	64	19	7.7	0.5	14.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL — Sandy glaciolacustrine sediments consisting of sand and loamy sand textures.

DRAINAGE — Imperfectly drained

USUAL CLASSIFICATION — Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	16	1	67	26	7	SL	5.4	7.0	0.5
Bmgj	7	47	1	80	14	6	LS	0.9	7.1	1.4
Btgj	4	52	3	79	14	7	LS	0.6	7.3	0.6
Ckg	3		0	90	7	3	S	0.4	7.5	13.1

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

BAY PROFILE NO. P12-2

LOCATION — Brant County, Burford Township, Lot 6, Con. IX, NTS Map Area 40P/1d, 17TNT 5467 7657.

ELEVATION — 253 metres

SITE — Road ditch

LANDFORM AND PARENT MATERIALS — Level lacustrine plain with sandy loam and loamy sand textures.

SLOPE — 0%

SOIL WATER REGIME — Imperfectly drained, conductivity high, saturation period moderately short.

STONINESS — Nonstony

CLASSIFICATION — Gleyed Brunisolic Gray Brown Luvisol, coarse loamy, mixed, neutral, strongly calcareous.

STATUS — Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR2/2m	SL	weak, medium, granular		friable	
Bmgj	13-25	10YR5.5/4m	FSL	weak, coarse, subangular blocky	coarse, platy	friable	few, distinct, 7.5YR5/6m
Bt	25-33	10YR4.5/6m	FSL	moderate, medium, subangular blocky		friable	
Btgj	33-46	10YR4/3m	SL	weak, medium, subangular blocky	medium granular	friable	few, prominent, 10YR7/8m
Bm	46-60	10YR5/6m	SL	weak, medium, subangular blocky	structureless	very friable	
Ckg	60-92	10YR6/3m	LS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	2	57	34	9	7.3	8.4	1.1
Bmgj	13-25	1	59	32	9	7.4	1.0	0.4
Bt	25-33	7	73	15	12	7.4	0.4	0.1
Btgj	33-46	6	64	23	13	7.4	0.7	1.6
Bm	46-60	0	75	18	7	7.3	0.3	3.3
Ckg	60-92	0	83	12	5	7.4	0.3	17.2

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL — Stratified loamy glaciolacustrine sediments consisting of silt loam and very fine sandy loam textures.

DRAINAGE — Well drained

USUAL CLASSIFICATION — Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	17	0	23	64	13	SIL	3.8	7.1	0.8
Bm	4	30	0	21	64	15	SIL	1.5	6.9	0.1
Bt	6	58	0	13	73	14	SIL	0.6	7.3	0.4
Ck	4		1	11	79	10	SIL	0.4	7.6	11.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1)BRT PROFILE NO. P353-2

LOCATION — Oakland Township, Lot 13, Con. II, NTS Map Area 40P/1c , 17TNT 5580 7655.

ELEVATION — 232 metres

SITE — Soil pit in road allowance, grass vegetation

LANDFORM AND PARENT MATERIALS — Hummocky, dissected lacustrine plain, dominantly silt loam stratified sediments.

SLOPE — 6%

SOIL WATER REGIME — Well drained, conductivity medium to low, saturation period short.

STONINESS — Nonstony

CLASSIFICATION — Brunisolic Gray Brown Luvisol, coarse silty, mixed, alkaline, strongly calcareous.

STATUS — Variant. Bm1 horizon has higher clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3.5/2d	SIL	moderate, fine to medium, granular		friable	
Bm1	13-20	10YR5/4d	SIL	moderate, medium, granular		friable	
Bm2	20-30	10YR6/3d	SIL	moderate, fine, platy		friable	
Bt	30-50	10YR4/3d	SIL	strong, medium, subangular blocky		firm	
Ck	50+	10YR6/3d	SIL	moderate, fine, platy		friable	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	26	62	12	6.9	5.7	0.3
Bm1	13-20	0	24	53	23	6.8	2.8	0.0
Bm2	20-30	0	24	67	9	6.6	1.2	0.0
Bt	30-50	0	22	63	15	6.9	0.0	0.1
Ck	50+		20	74	6	7.7	0.0	24.0

(2)BRT PROFILE NO. 353-1

LOCATION: South Dumfries Township, Lot 3, Con. VI, NTS Map Area 40P/8c, 17TNT 5606 7937.

ELEVATION: 256 metres

SITE: Pit in road allowance

LANDFORM AND PARENT MATERIALS: Very gently sloping dissected lacustrine plain, dominantly silt loam stratified sediments.

SLOPE: 2%

SOIL WATER REGIME: Well drained, conductivity medium to low, saturation period short.

STONINESS: Nonstony

CLASSIFICATION: Brunisolic Gray Brown Luvisol, coarse silty, mixed, alkaline, strongly calcareous.

STATUS: Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR4/3m	SIL	medium, granular		friable	
Bm	18-43	10YR4/4m	SIL	weak, medium, subangular blocky	medium, granular	friable	
Bt1	43-64	10YR4/4m	SIL	moderate, medium, subangular blocky		friable	
Bt2	64-74	10YR4/4m	SIL	moderate, coarse, subangular blocky		firm	
Ck	74-97	10YR5/3m	SIL	moderate, coarse, subangular blocky	coarse, pseudo platy	firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	22	69	9	7.4	2.5	2.9
Bm	18-43	0	8	77	15	7.3	1.0	0.2
Bt1	43-64	0	10	76	14	7.2	1.2	0.2
Bt2	64-74	0	9	79	12	7.4	0.5	0.5
Ck	74-97	0	6	86	8	7.6	0.6	12.7

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Varved clayey lacustrine sediments consisting of silty clay loam or silty clay textures.

DRAINAGE Moderately well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	6	16	0	23	53	24	SIL	5.0	7.1	0.4
Bm	7	29	0	19	62	19	SIL	1.6	6.8	0.1
Bt	8	52	0	14	51	35	SICL	0.9	7.2	2.2
Ck	7		0	3	61	36	SICL	0.3	7.6	18.0

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(2)BFO PROFILE NO. P476-1

LOCATION South Dumfries Township, Lot 2, Con. VI, NTS Map Area 40P/8b, 17TNT 5615 7933.

ELEVATION 238 metres

SITE Roadside ditch

LANDFORM AND PARENT MATERIALS Hummocky, dissected lacustrine plain, dominantly silty clay loam or silty clay varved sediments.

SLOPE 16%

SOIL WATER REGIME Moderately well drained, conductivity low, saturation period short.

STONINESS Nonstony

CLASSIFICATION Brunisolic Gray Brown Luvisol, fine clayey, mixed, alkaline, strongly calcareous.

STATUS Variant. Silt loam layer is deeper than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR4/2d	SIL	strong, medium, granular		friable	
Bm	13-43	10YR6/3d	SIL	moderate, thick, platy	moderate, medium, granular	friable	
2Bt	43-55	7.5YR4/2m	SIC	strong, medium, prismatic	medium, angular blocky	very firm	
2BC	55-75	7.5YR4/2m, 10YR5/3m	SIC	strong, coarse, angular blocky		very firm	
2Ck	75+	7.5YR4/2m, 10YR5/4m	SIC	strong, medium, angular blocky		very firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	3	69	28	7.0	7.9	0.3
Bm1	13-28	0	2	79	19	6.4	2.8	0.0
Bm2	28-43	0	1	83	16	6.6	0.8	0.0
2Bt	43-55	0	1	50	49	7.0	0.8	0.0
2BC	55-75	0	2	48	50	7.6	0.4	9.6
2Ck	75+	0	2	53	45	7.7	0.4	11.2

(1) BFO PROFILE NO. 476-2-1

LOCATION	Brantford Township, Lot 1, Con. III, NTS Map Area 40P/1c, 17TNT 5597 7654
ELEVATION	229 metres
SITE	Cultivated field
LANDFORM AND PARENT MATERIALS	Nearly level lacustrine plain, dominantly silty clay loam or silty clay varved sediments
SLOPE	2%
SOIL WATER REGIME	Well drained, conductivity low, saturation period short.
STONINESS	Nonstony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, fine clayey, mixed, alkaline, strongly calcareous.
STATUS	Variant. Slightly lower clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-15	10YR3/2m	L	strong, medium, granular		friable	
Bm	15-23	10YR5.5/2m	L	moderate, medium, subangular blocky		firm	
Bt1	23-41	10YR5/3m	SIL	strong, fine, subangular blocky		firm	
Bt2	41-56	10YR4/2.5m	SICL	moderate, medium, prismatic	strong, medium, angular blocky	firm	
Bt3	56-69	10YR3/2m	CL	weak, medium, prismatic	strong, medium, angular blocky	very firm	
Ck	69+	10YR6/4m	SICL	coarse, angular blocky		very firm	

Horizon	Depth cm	Grav. 2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ap	0-15	0	40	40	20	7.1	4.0	0.2
Bm	15-23	0	41	39	20	6.7	3.2	0
Bt1	23-41	0	28	47	25	7.0	1.1	0
Bt2	41-56	0	16	50	34	7.1	1.1	0.1
Bt3	56-69	0	30	40	30	7.3	1.1	0.1
Ck	69+	0	3	67	30	7.6	0.3	18.4

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Coarse fluvial sediments consisting of gravelly sand and gravel textures.

DRAINAGE Rapidly drained

USUAL CLASSIFICATION Orthic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	2	17	8	39	49	12	L	4.2	7.2	1.3
Bm	2	35	21	41	47	12	GL	1.7	7.2	0.3
Bt	3	76	31	52	28	20	GSCL	0.9	6.8	1.4
Ck	2		48	81	13	6	GLS	0.3	7.5	20.7

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1) BUF PROFILE NO. P17-1

LOCATION Burford Township, Lot 3, Con. III, NTS Map Area 40P/1e, 17TNT 5457 7763.

ELEVATION 262 metres

SITE Pit in road allowance

LANDFORM AND PARENT MATERIALS Level fluvial plain, dominantly gravelly sand and gravel sediments.

SLOPE 0%

SOIL WATER REGIME Rapidly drained, conductivity high, saturation period very short.

STONINESS Slightly stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, sandy skeletal, mixed, alkaline, strongly calcareous.

STATUS Taxadjunct to Orthic Gray Brown Luvisol

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	SIL	weak, medium, granular		friable	
Bm	18-33	10YR4.5/4m	SIL	weak, medium, subangular blocky	medium, granular	friable	
2Bt	33-50	7.5YR3/2m	GCL	strong, medium, subangular blocky		firm	
2Ck	50-90	10YR4.5/3m	GCS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	28	59	13	7.2	4.9	2.0
Bm	18-33	13	30	57	13	7.1	1.9	0.4
2Bt	33-50	25	39	30	31	7.3	1.8	3.9
2Ck	50-90	37	89	6	5	7.5	0.3	27.3

(2) BUF.CO PROFILE NO. P26

LOCATION	South Dumfries Township, Lot 12, Con. V, NTS Map Area 40P/8c, 17TNT 5564 7918.
ELEVATION	287 metres
SITE	Ditch exposure on road allowance
LANDFORM AND .PARENT MATERIALS	Ridged fluvial landform, dominantly coarse gravel and cobble deposits
SLOPE	12%
SOIL WATER REGIME	Rapidly drained, conductivity rapid, saturation period very short.
STONINESS	Moderately stony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, loamy skeletal, mixed, alkaline, strongly calcareous
STATUS	Modal, cobble phase

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15	10YR3/3m	L	moderate, fine, granular		friable	
Bm	15-36	10YR4/4m	GSL	moderate, medium, granular		friable	
Bt1	36-60	5YR3/4m	GSL	weak, medium, granular		friable	
Bt2	60-118	5YR3/3m	GSL	weak, medium, granular	structureless	friable	
Ck	118+	5YR4/3m	GSL	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-15	16	49	39	12	7.2	3.4	0.6
Bm	15-36	28	53	38	9	7.2	1.5	0.1
Bt1	36-60	29	59	27	14	6.6	0.4	0.1
Bt2	60-118	40	57	28	15	6.4	0.6	0.1
Ck	118+	59	73	20	7	7.5	0.3	14.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL: 40 to 100 cm sandy textures over coarse fluvial sediments consisting of gravelly sand or gravel textures.

DRAINAGE: Well drained

USUAL CLASSIFICATION: Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	15	0	48	42	10	L	3.2	7.4	3.7
Bm	2	36	0	62	28	10	SL	1.0	7.5	0.2
2Bt	2	74	29	55	23	22	GSCL	0.7	7.4	9.7
2Ck	1		34	93	6	1	GS	0.1	7.7	27.3

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

CAD PROFILE NO. P20-1

LOCATION: Burford Township, Lot 3, Con. IX, NTS Map Area 40P/1d, 17TNT 5476 7691.

ELEVATION: 256 metres

SITE: Pit in road allowance

LANDFORM AND PARENT MATERIALS: Level fluvial plain, dominantly sandy veneer over gravelly sand and gravel sediments.

SLOPE: 0%

SOIL WATER REGIME: Well drained, conductivity high, saturation period very short.

STONINESS: Slightly stony

CLASSIFICATION: Brunisolic Gray Brown Luvisol, loamy over sandy skeletal, mixed, alkaline, strongly calcareous.

STATUS: Variant. Upper solum is finer textured than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15	10YR3/3m	L	weak, medium, granular		friable	
AB	15-23	10YR3/3m, 10YR4/4m	L	weak, medium, granular		friable	
Bm	23-49	7.5YR4.5/4m	SL	weak, coarse, subangular blocky		friable	
2Bt	49-60	7.5YR3.5/4m	SCL	strong, coarse, subangular blocky	medium, subangular blocky	firm	
2BC	60-70	7.5YR3.5/4m	GSL	structureless		loose	
2Ck	70-103	10YR4/3m	GMS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-15	4	48	42	10	7.4	3.2	3.7
AB	15-23	0	50	40	10	7.5	1.5	0.3
Bm	23-49	0	73	17	10	7.5	0.5	0.1
2Bt	49-60	12	51	20	29	7.4	0.6	0.2
2BC	60-70	45	59	27	14	7.4	0.8	19.2
2Ck	70-103	34	93	6	1	7.7	0.1	27.3

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm sandy textures over coarse fluvial sediments consisting of gravelly sand or gravel.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	2	29	0	51	38	11	SL	7.4	7.3	1.6
Bmgj	2	45	2	58	35	7	SL	1.7	7.2	0.3
2Btgj	2	59	10	54	34	12	SL	1.0	7.4	2.4
2Ckg	2		25	49	45	6	GSL	0.2	7.6	26.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

CML PROFILE NO. P22-1

LOCATION Burford Township, Lot 6, Con. IX, NTS Map Area 40P/1d, 17TNT 5457 7686.

ELEVATION 253 metres

SITE Roadside ditch

LANDFORM AND PARENT MATERIALS Level fluvial plain, dominantly sandy veneer over gravelly sand sediments.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity rapid, saturation period medium

STONINESS Nonstony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, coarse loamy over sandy skeletal, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-30	10YR2/2m	FSL	moderate, medium, granular		friable	
Bmgj	30-45	2.5Y5/4m	FSL	moderate, medium subangular blocky		friable	few, prominent, 10YR6/6m
2Btg	45-55	10YR4/2m, 2.5Y5/4m	SL	moderate, medium, subangular blocky		firm	many, prominent, 7.5YR5/6m
2Ckg	55-84	10YR5/2m	GSL	structureless		very firm and compact	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-30	0	54	33	13	7.2	6.9	1.2
Bmgj	30-45	0	56	32	12	7.1	0.8	0.1
2Btg	45-55	8	55	29	16	7.3	1.0	1.5
2Ckg	55-84	38	68	25	6	7.6	0.3	21.6

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Stratified loamy lacustrine sediments consisting mainly of silt loam and very fine sandy loam textures.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	2	20	0	31	54	15	VFSL	7.0	7.1	0.6
Bg	4	46	0	41	50	9	SIL	0.6	7.3	0.5
Ckg	2		0	43	52	5	SIL	0.2	7.5	11.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1) CWO PROFILE NO. P-413

LOCATION	Oakland Township, Lot 4, Con. IV, NTS Map Area 40P/1e, 17TNT 5518 7680.
ELEVATION	241 metres
SITE	Wooded
LANDFORM AND PARENT MATERIALS	Level lacustrine plain, dominantly silt loam stratified sediments.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity medium to low, saturation period prolonged
STONINESS	Nonstony
CLASSIFICATION	Orthic Humic Gleysol, coarse silty, mixed, neutral, strongly calcareous.
STATUS	Variant. C horizon is shallower and lower in CaCO3 than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15	10YR3/1m	SIL	weak, medium, granular		friable	
Bg	15-28	10YR5/2m	SIL	weak, medium, subangular blocky	medium, platy	friable	many, prominent, 10YR6/6m
Ckg	28-70	10YR6/2m	SIL	massive		friable	many, prominent, 10YR6/6m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-15	0	13	70	17	6.9	7.0	0.1
Bg	15-28	0	7	82	11	7.3	0.2	1.1
Ckg	28-70	0	4	88	8	7.4	0.1	12.0

(2) CWO PROFILE NO. P593-1

LOCATION	Burford Township, Lot 2, Con. III, NTS Map Area 40P/1e, 17TNT 5461 7764.
ELEVATION	262 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Level lacustrine plain, dominantly stratified silt loam textures 40 to 100 cm deep over loamy sand.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity medium to low, saturation period prolonged.
STONINESS	Nonstony
CLASSIFICATION	Orthic Humic Gleysol, coarse silty, mixed, alkaline, strongly calcareous.
STATUS	Variant. Subsoil is coarser in texture than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-25	10YR2/2m	L	medium, subangular blocky	moderate, medium, granular	friable	
Bg1	25-30	5Y5/1m	L	moderate, medium, subangular, blocky		friable	many, prominent, 7.5YR5/8m
Bg2	30-56	2.5Y5/2m	L	coarse, subangular blocky		firm	many, prominent, 7.5YR6/8m
2Bg	56-68	10YR5/4m	SL	coarse, subangular blocky		friable	many, prominent, 10YR5/8m
2Ckg	68-90	10YR5/2m	LS	weak, coarse, subangular blocky		friable	many, prominent, 10YR5/6m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-25	0	49	39	12	7.3	6.9	1.1
Bg1	25-30	0	49	40	11	7.3	1.7	0.1
Bg2	30-56	0	41	50	9	7.3	0.4	0.1
2Bg	56-68	0	66	30	4	7.4	0.2	0.5
2Ckg	68-90	0	82	17	1	7.5	0.2	10.4

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm loamy or silty sediments over loamy till.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	2	35	0	26	57	17	SIL	4.0	7.2	1.6
Bmgj	2	68	0	43	46	11	L	1.0	7.1	0.2
Btg	2	93	0	34	50	16	SIL	0.6	7.1	0.3
2Ckg	2		4	34	54	12	SIL	0.4	7.6	14.7

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

CTG PROFILE NO. P359-1

LOCATION South Dumfries Township, Lot 35, Con. V, NTS Map Area 40P/8d, 17TNT 5452 7893.

ELEVATION 302 metres

SITE Pit in road allowance

LANDFORM AND PARENT MATERIALS Nearly level veneered till plain, dominantly silt loam textures 40 to 100 cm deep over loam till deposits.

SLOPE 1%

SOIL WATER REGIME Imperfectly drained, conductivity medium to low, saturation period medium.

STONINESS Nonstony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, coarse silty, mixed, alkaline, strongly calcareous.

STATUS Modal. 2Ckg horizon is lower in carbonates than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-30	10YR3/1.5m	SIL	medium, granular		friable	
Bm	30-48	10YR5/4m	L	weak, subangular blocky	medium, subangular blocky	friable	
Btgj	48-65	10YR4/3m	SIL	coarse, blocky	medium, angular blocky	firm	common, 10YR6/6m
2Ckg	65-90	10YR4.5/2m	SIL	coarse, subangular blocky		firm	common, 10YR6/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-30	0	30	50	20	7.4	4.7	3.1
Bm	30-48	0	38	48	14	7.4	1.3	0.2
Btgj	48-65	0	31	54	15	7.5	0.7	0.5
2Ckg	65-90	0	30	56	14	7.6	0.5	11.3

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Stony gravelly sandy loam till.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	13	10	30	56	14	SIL	6.1	6.6	0.6
Bm	2	36	3	28	58	14	SIL	1.2	6.3	0.1
2Bt	2	99	33	43	36	21	GL	1.2	6.9	3.9
2Ck	1		55	67	27	7	GSL	0.4	7.3	16.8

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

DUF PROFILE NO. P241

LOCATION South Dumfries Township, Lot 16, Con. IV, NTS Map Area 40P/1f, 17TNT 5554 7886.

ELEVATION 283 metres

SITE Wooded area

LANDFORM AND PARENT MATERIALS Hummocky till plain, dominantly stony, gravelly sandy loam deposits.

SLOPE 15%

SOIL WATER REGIME Well drained, conductivity high, saturation period very short.

STONINESS Very stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, loamy skeletal, mixed, neutral, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3/2m	SIL	moderate, medium, granular		friable	
Bm1	13-30	10YR3/4m	SIL	weak, fine, granular		friable	
Bm2	30-40	10YR4/4m	SIL	moderate, medium granular	fine, platy	friable	
2Bt1	40-75	5YR4/3m	GL	strong, medium, subangular blocky		friable	
2Bt2	75-123	7.5YR4/3m	GL	moderate, medium, subangular, blocky		friable	
2Ck	123+	10YR5/3.5m	GSL	structureless		friable	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	10	30	56	14	6.6	6.1	0.6
Bm1	13-30	6	30	58	12	6.0	1.0	0.1
Bm2	30-40	6	26	57	17	6.5	1.3	0.0
2Bt1	40-75	28	39	35	25	6.9	0.8	2.2
2Bt2	75-123	38	48	36	16	6.9	1.3	5.5
2Ck	123+	55	66	27	7	7.3	0.4	16.8

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Mainly lacustrine sand and loamy sand.

DRAINAGE Rapidly drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	20	1	68	24	8	SL	2.1	6.6	0.4
Bm	9	55	0	76	17	7	LS	0.3	6.5	0.2
Bt	4	69	1	78	9	13	SL	0.2	6.6	0.0
Ck	4		3	92	6	2	S	0.0	7.5	20.3

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

FOX PROFILE NO. P30-1

LOCATION South Dumfries Township, Lot 23, Con. VI, NTS Map Area 40P/8c, 17TNT 5100 7917.

ELEVATION 277 metres

SITE Pit in road allowance

LANDFORM AND PARENT MATERIALS Nearly level lacustrine plain, dominantly sandy loam and loamy sand textures.

SLOPE 1%

SOIL WATER REGIME Rapidly drained, conductivity high, saturation period very short.

STONINESS Nonstony

CLASSIFICATION Brunisolic Gray Brown Luvisol, sandy, mixed, alkaline, strongly calcareous

STATUS Moda
l

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	L	weak, medium, granular		friable	
Bm	18-60	10YR5/6m	SL	weak, subangular blocky		loose	
Btj	60-78	7.5YR4/4m	SL	moderate, coarse subangular blocky		friable	
Bt	78-94	5YR3/4m	SL	moderate, coarse, subangular blocky		friable	
Ck	94+	10YR5/3m	S	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	49	38	12	7.2	2.9	1.5
Bm1	18-43	0	62	31	7	7.0	0.2	0.1
Bm2	43-60	0	72	21	7	6.9	0.1	0.1
Btj	60-78	0	69	23	8	6.9	0.2	0.4
Bt	78-94	0	76	11	13	6.9	0.1	0.1
Ck	94+	0	94	3	3	7.6		14.9

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Coarse fluvial sediments consisting of mainly gravelly sand and gravel textures.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	20	0	54	31	15	SL	4.0	7.5	1.4
2BC	1	46	31	49	38	13	GL	0.7	7.9	22.9
3Ckg	2	3	36	95	1	4	GS	0.1	7.8	26.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

GFD PROFILE NO. 132-1

LOCATION	Burford Township, Lot 6, Con. XI, NTS Map Area 40P/1d, 17TNT 5466 7656.
ELEVATION	253 metres
SITE	Pit in road allowance
LANDFORM AND PARENT MATERIALS	Level fluvial plain, dominantly gravelly sand textures
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity high, saturation period prolonged
STONINESS	Nonstony
CLASSIFICATION	Rego Humic Gleysol, sandy skeletal, mixed, alkaline, strongly calcareous
STATUS	Taxadjunct to Orthic Humic Gleysol, shallower to CaCO3 than normal.

Horizon	Depth (range) cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR2/2m	SL	moderate, medium, granular		friable	
2BC	20-45	10YR4/4m, 2.5Y6/2m	GL	moderate, medium subangular blocky		friable	many, prominent, 7.5YR5/8m
3Ckg	45-60	10YR4/2m	GS	structureless		loose	
4Ckgj	60+	10YR4/3m	S	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	54	31	15	7.5	4.0	1.4
2BC	20-45	31	49	38	13	7.9	0.7	22.9
3Ckg	45-60	56	96	0	4	7.8	0.0	26.2
4Ckgj	60+	15	94	2	3	7.8	0.1	26.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Clayey glacial till consisting most commonly of silty clay loam textures.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	22	1	35	40	25	L	4.4	7.1	2.6
Bmgj	2	33	0	34	38	28	CL	1.5	7.1	0.4
Btgj	3	51	2	21	45	34	CL	0.9	7.1	0.4
Ckg	5		1	15	54	31	SICL	0.2	7.6	16.6

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

GOB PROFILE NO. P460-1

LOCATION Burford Township, Lot 24, Con. I, NTS Map Area 40P/2h, 17TNT 5322 7763.

ELEVATION 290 metres

SITE Pit in road allowance

LANDFORM AND PARENT MATERIALS Nearly level till plain, dominantly silty clay loam and silty clay textures.

SLOPE 1%

SOIL WATER REGIME Imperfectly drained, conductivity medium to low, saturation period medium.

STONINESS Slightly stony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, fine silty, mixed, neutral, strongly calcareous.

STATUS Modal. C horizon is lower in CaCO3 than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-23	10YR2/2m	CL	moderate, medium, granular		friable	
Bm	23-33	10YR5/3m	CL	moderate, fine, subangular blocky		friable	
Btgj	33-53	10YR4/3m	SICL	prismatic	medium and fine, angular blocky	firm	common, distinct, 10YR6/6m
Ckgj	53-100	10YR4.5/3m	SICL	coarse, subangular blocky		very firm	many, prominent, 10YR5/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-23	0	44	27	28	7.0	6.6	1.6
Bm	23-33	0	42	26	32	6.8	1.5	0.1
Btgj	33-53	6	19	44	37	6.8	0.8	0.0
Ckgj	53-100	0	19	49	32	7.2	0.5	6.3

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Sandy lacustrine consisting of mainly sand or loamy sand textures.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	18	0	72	17	11	SL	13.7	5.9	0.5
Aeg	1	25	0	77	14	9	SL	4.6	6.5	0.0
Btg	1	58	0	74	14	12	SL	1.6	6.7	0.1
Ckg	2		3	90	6	4	S	0.6	7.1	13.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

GNY PROFILE NO. P133

LOCATION	Burford Township, Lot 10, Con. IV, NTS Map Area 40P/1d , 17TNT 5412 7739.
ELEVATION	259 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Level lacustrine plain, dominantly loamy sand and sand textures.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity high, saturation period long.
STONINESS	Nonstony
CLASSIFICATION	Humic Luvic Gleysol, sandy, mixed, neutral, strongly calcareous.
STATUS	Taxadjunct to Orthic Humic Gleysol.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR2/2m	SL	weak, fine granular		loose	
Aeg	18-25	10YR4/2m	SL	weak, medium granular		loose	many, prominent, 10YR5/8m
Btgj	25-58	10YR5/8m	SL	weak, medium granular		friable	
Ckg	58-69	10YR4/2m	LS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	72	17	11	5.9	13.7	0.5
Aeg	18-25	0	78	13	9	6.5	4.6	0.0
Btgj	25-58	0	73	14	13	6.7	1.6	0.1
Ckg	58-69	0	88	7	5	7.1	0.7	8.0

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Loamy till consisting of dominantly loam textures.
DRAINAGE	Well drained
USUAL CLASSIFICATION	Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	5	20	2	32	53	15	SIL	3.2	7.1	0.6
Bm	6	45	1	35	52	13	SIL	1.0	6.2	0.1
Bt	6	68	2	36	42	22	L	0.6	6.8	0.4
Ck	6		4	34	51	15	L	0.3	7.4	16.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1)GUP PROFILE NO. P291-1

LOCATION	South Dumfries Township, Lot 32, Con. VI, NTS Map Area 40P/8d, 17TNT 5466 7896.
ELEVATION	296 metres
SITE	Road side ditch
LANDFORM AND PARENT MATERIALS	Gently undulating till plain, dominantly loam textures.
SLOPE	9%
SOIL WATER REGIME	Well drained, conductivity medium, saturation period short.
STONINESS	Moderately stony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, coarse silty, neutral, strongly calcareous.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	SIL	moderate, medium, granular		friable	
Bm	18-33	10YR5/3.5m	SIL	medium, subangular blocky		firm	
Bt	33-61	7.5YR4/2m	CL	medium, subangular blocky		very firm	
Ck	61+	10YR4/3.5m	SIL	medium, subangular blocky		very firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	1	27	55	18	7.5	3.7	0.8
Bm	18-33	1	26	58	16	7.3	0.9	0.0
Bt	33-61	2	17	54	29	7.2	0.4	0.0
Ck	61+	4	13	68	19	7.0	0.4	13.6

(2)GUP PROFILE NO. P291-2

LOCATION	South Dumfries Township, Lot 10, Con. VI, NTS Map Area 40P/8c, 17TNT 5574 7937.
ELEVATION	308 metres
SITE	Road ditch
LANDFORM AND PARENT MATERIALS	Hummocky moraine, dominantly loam and sandy loam textures.
SLOPE	12%
SOIL WATER REGIME	Well drained, conductivity medium to high, saturation period very short.
STONINESS	Moderately stony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, coarse silty, mixed, alkaline, strongly calcareous
STATUS	Variant, reddish phase, C horizon coarser texture than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-10	10YR2/2m	SIL	weak, medium, granular		friable	
Bm1	10-25	10YR4/4m	L	moderate, medium, granular		friable	
Bm2	25-30	10YR3.5/4m	L	strong, medium, subangular blocky		friable	
Bt1	30-60	7.5YR4/4m	L	medium, blocky	strong, medium, subangular blocky	firm	
Bt2	60-80	10YR3/4m	SIL	medium, blocky	strong, medium, subangular blocky	very firm	
Ck	80+	7.5YR4/4m	GSL	massive		very firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-10		37	50	13	6.8	5.5	0.3
Bm1	10-25	10	39	49	12	5.8	1.9	0.0
Bm2	25-30	12	40	48	12	5.2	0.8	2.2
Bt1	30-60	14	28	48	24	6.1	0.8	0.7
Bt2	60-80	8	32	53	14	6.9	0.0	2.9
Ck	80+	43	58	35	7	7.8	0.0	16.0

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Clayey lacustrine sediments consisting of mainly clay or heavy clay textures.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	5	19	0	4	56	40	SIC	3.9	6.6	0.9
Bmgj	3	43	0	3	49	48	SIC	1.4	7.2	2.9
Btgj	3	52	0	1	44	55	SIC	0.9	7.1	0.3
Ckg	7		0	2	23	74	HC	0.5	7.6	12.9

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

HIM PROFILE NO. P499-1

LOCATION Onondaga Township, Lot 7, Con. III, NTS Map Area 40P/1h, 17TNT 5724 7759.

ELEVATION 207 metres

SITE Pit in road allowance

LANDFORM AND PARENT MATERIALS Level lacustrine plain, dominantly silty clay and heavy clay textures.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity low, saturation period medium to prolonged.

STONINESS Nonstony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, fine clayey, mixed, alkaline, strongly calcareous

STATUS Variant. Higher silt content in upper solum than normal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3/2m	SIC	medium, granular		friable	
Bmgj	13-28	10YR5/4m	SIC	moderate, medium, subangular blocky		friable	few, prominent, 7.5YR5/8m
Bt	28-54	10YR3/3m	SIC	prismatic	medium, angular, blocky	very firm	
Ckg	54-90	10YR5/2m	HC	coarse, angular blocky		extremely firm	common, prominent, 10YR6/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	3	56	41	7.3	5.7	0.8
Bmgj	13-28	0	3	50	47	7.2	2.5	0.0
Bt	28-54	0	1	43	56	7.1	0.8	0.3
Ckg	54-90	0	1	17	82	7.6	0.6	15.6

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm silt loam over silty clay loam lacustrine sediments

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	8	0	15	72	13	SIL	5.0	5.5	0.1
Bm	3	59	0	17	72	11	SIL	1.4	4.6	0.1
Bt	2	79	0	11	67	22	SIL	0.4	6.4	0.1
2Ck	2		0	6	63	31	SICL	0.2	7.7	17.9

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

HBG PROFILE NO. 502

LOCATION Brant County, South Dumfries Township, Lot 3, Con. II, NTS Map Area 40P/1g, 17TNT 5625 7876.

ELEVATION 229 metres

SITE Woodlot, maple, elm, beech, pine

LANDFORM AND PARENT MATERIALS Very gently undulating dissected lacustrine plain, dominantly silt loam over silty clay loam textures.

SLOPE 1-2%

SOIL WATER REGIME Well drained, conductivity medium to low, saturation period moderately short.
STONINESS Nonstony

CLASSIFICATION Brunisolic Gray Brown Luvisol, fine silty, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-8	10YR3/1.5m	SIL	moderate, medium to fine granular		soft	
Bm1	8-22	10YR4/3m	SIL	weak, thin, platy	weak, very fine, subangular blocky	soft	
Bm2	22-54	10YR4/3m	SIL	moderate, medium, subangular blocky		slightly hard	
Bm3	54-63	10YR5/3m	SIL	moderate, medium, subangular blocky		hard	
Bt	63-73	5YR4/2.5m	SIL	strong, coarse, subangular blocky	medium, subangular blocky	very hard	
2Bt	73-85	5YR3.5/2m	SIL	strong, very coarse, subangular blocky	coarse, subangular blocky	very hard	
2Ck	85+	10YR4.5/3m	SICL	strong, coarse, subangular blocky	thick, platy	very hard	

Horizon	Depth cm	Grav. 2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-8	0	15	72	13	5.5	5.0	0.1
Bm1	8-22	0	16	71	13	4.4	2.3	0.0
Bm2	22-54	0	18	70	12	4.4	1.4	0.0
Bm3	54-63	0	18	74	8	5.0	0.4	0.0
Bt	63-73	0	17	63	20	6.1	0.3	0.0
2Bt	73-85	0	9	67	24	6.7	0.5	0.2
2Ck	85+	0	6	64	30	7.7	0.3	13.7

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Loamy lacustrine sediments consisting of very fine sandy loam and loamy very fine sand textures.
DRAINAGE	Imperfectly drained
USUAL CLASSIFICATION	Gleyed Gray Brown Luvisol

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

HIG PROFILE NO. P47

LOCATION	Brant County, South Dumfries Township, Lot 34, Con. IV, NTS Map Area 40P/1e, 17TNT 5463 7866.
ELEVATION	277 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Very gently sloping lacustrine plain, dominantly very fine sandy loam and loamy very fine sand textures.
SLOPE	2%
SOIL WATER REGIME	Imperfectly drained, conductivity medium, saturation period medium.
STONINESS	Nonstony
CLASSIFICATION	Gleyed Brunisolic Gray Brown Luvisol, coarse loamy, mixed, neutral, strongly calcareous.
STATUS	Taxadjunct to Gleyed Gray Brown Luvisol

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR3/2m	VFSL	weak, fine, granular		loose	
Bmgj1	20-33	10YR4/3.5m	VFSL	weak, medium, subangular blocky	medium, granular	friable	few, distinct, 5YR5/6m, and 5YR5/4m
Bmgj2	33-45	10YR5/4m, 10YR4/3m	VFSL	weak, medium, subangular blocky		loose	few, prominent, 5YR5/7m, and common10YR5/6m
Btgj	45-70	10YR5/3m, 10YR4/4m	VFSL	weak, coarse, subangular blocky		loose	common, strong, 7.5YR5/6m, and many, prominent 10YR3/1m
Ckgj	70+	10YR5/2.5m	VFLS	weak, coarse, subangular blocky		loose	few, 10YR4/4m and 10YR5/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	65	25	10	7.2	3.4	1.1
Bmgj1	20-33	0	69	20	10	7.0	0.7	0.0
Bmgj2	33-45	0	75	20	5	6.9	0.6	0.0
Btgj	45-70	0	72	20	8	7.1	0.0	0.5
Ckgj	70+	0	76	20	4	7.2	0.4	11.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	Clayey till sediments consisting mainly of silty clay loam textures.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

KVN PROFILE NO. P513-1

LOCATION	Burford Township, Lot 24, Con. VIII, NTS Map Area 40P/2a, 17TNT 5350 7670.
ELEVATION	262 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Level till plain, dominantly silty clay loam and silty clay textures.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity low, saturation period prolonged
STONINESS	Nonstony
CLASSIFICATION	Orthic Humic Gleysol, fine clayey, mixed, neutral, strongly calcareous.
STATUS	Modal. Ckg horizon in lower in CaCO3 than normal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-23	10YR2/2m	SICL	strong, coarse, granular		friable	
Bg	23-58	10YR4/2m	SIC	medium, angular blocky		very, firm	many, prominent, 10YR5/8m
Ckg	58-90	5Y5/1m	SIC	coarse, angular blocky		extremely firm	many, prominent, 10YR5/6m, 7.5YR4/4m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-23	0	12	49	39	6.9	8.4	0.1
Bg	23-46	0	14	45	41	7.1	1.3	0.0
Btjg	46-58	0	11	42	47	7.2	0.6	0.1
Ckg	58-90	4	11	48	41	7.3	0.5	4.3

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Clayey till sediments consisting of clay and heavy clay textures.

DRAINAGE Poorly drained

USUAL CLASSIFICATION Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M %	pH $CaCl_2$	$CaCO_3$ %
Ah	5	17	0	7	58	35	SICL	4.1	6.4	0.3
Bg	6	53	0	4	53	43	SIC	0.8	6.6	1.1
Ckg	4		1	2	50	48	SIC	0.1	7.6	15.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

LIC PROFILE NO. 87697

LOCATION Tuscarora Township, Lot 24, Con. V, NTS Map Area 40P/1b, 17TNT 5697 7698.

ELEVATION 207 metres

SITE Soil pit in cultivated field

LANDFORM AND PARENT MATERIALS Level lacustrine plain, dominantly silty clay and heavy clay textures.

SLOPE 0%

SOIL WATER REGIME Poorly drained, conductivity low, saturation period prolonged.

STONINESS Nonstony

CLASSIFICATION Orthic Humic Gleysol, fine clayey, mixed, alkaline, strongly calcareous

STATUS Variant. Somewhat lower clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-15	10YR3/2m	SICL	medium, coarse blocky	weak, subangular blocky	firm	
Bg	15-50	10YR4/2m	SIC	massive	moderate, coarse angular blocky	extremely firm	common, abundant, 10YR5/8m
Ckg	50-60	10YR4.5/m	C	coarse, angular blocky	weak, coarse angular blocky	extremely firm	abundant, prominent, 10YR5/6m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ap	0-15	0	10	54	36	6.8	3.0	0.0
Bg	15-50	0	8	48	44	6.5	0.9	0.0
Ckg	50-60	0	1	40	59	7.4	0.0	16.2

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL	40 to 100 cm loamy or silty sediments over loamy till.
DRAINAGE	Poorly drained
USUAL CLASSIFICATION	Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	26	0	25	54	21	SIL	5.5	7.2	0.3
Bg	6	74	0	26	53	21	SIL	0.6	7.1	0.2
2Ckg	2		3	27	53	20	SIL	0.4	7.3	1.6

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

MYL PROFILE NO. P360

LOCATION	South Dumfries Township, Lot 36, Con. 4, NTS Map Area 40P/1e, 17TNT 5452 7872.
ELEVATION	296 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Nearly level veneered till plain, dominantly silt loam textures over loam till deposits.
SLOPE	0%
SOIL WATER REGIME	Poorly drained, conductivity medium to low, saturation period prolonged
STONINESS	Nonstony
CLASSIFICATION	Humic Luvic Gleysol, fine loamy, mixed, neutral, strongly calcareous.
STATUS	Taxadjunct to Orthic Humic Gleysol. 2Ckg is lower in $CaCO_3$ than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ap	0-28	10YR3/1m	SIL	moderate, medium, granular		friable	
Bmg1	28-46	10YR5/2m	L	moderate, medium, subangular blocky		firm	many, prominent, 10YR5/6m
Bmg2	46-63	10YR4/2m	L	coarse, blocky	medium, subangular blocky	firm	many, prominent, 10YR5/6m
2Btg	63-75	10YR4.5/2m	L	coarse, blocky	medium, subangular blocky	very firm	many, prominent, 10YR5/6m
2Ckg	75+	10YR4/1.5m	L	coarse, blocky	medium, subangular blocky	firm	many, distinct, 10YR4/4m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ap	0-28	0	28	51	21	7.0	5.2	0.0
Bmg1	28-46	0	32	47	20	6.8	0.4	0.0
Bmg2	46-63	0	33	48	19	6.9	0.3	0.1
2Btg	63-75	0	23	48	29	7.0	0.0	0.3
2Ckg	75+	5	26	49	25	7.0	0.3	1.4

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Clayey till consisting most commonly of silty clay loam textures.

RAINAGE Moderately well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	9	22	1	30	51	19	SIL	2.8	6.9	1.8
Bm	4	33	2	22	54	24	SIL	1.4	6.7	0.2
Bt	10	65	1	12	49	39	SICL	0.8	7.1	1.5
Ck	8		2	11	59	30	SICL	0.1	7.5	19.8

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

(1) MUI.L PROFILE NO. 456-3

LOCATION Burford Township, Lot 10, Con. VIII, NTS Map Area 40P/1d, 17TNT 5431 7699.

ELEVATION 267 metres

SITE Road side ditch

LANDFORM AND PARENT MATERIALS Hummocky till plain, dominantly silty clay loam and silty clay texture.

SLOPE 16%

SOIL WATER REGIME Moderately well drained, conductivity medium to low, saturation period moderately short.

STONINESS Moderately stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, fine silty, mixed, neutral, strongly calcareous.

STATUS Variant. Ck horizon is lower in clay than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	SIL	moderate, medium, granular		friable	
Bm	18-28	10YR5/3m	CL	moderate, medium, granular		friable	
Bt	28-76	7.5YR4/2m	SICL	strong, medium, angular blocky		firm	
Ck	76-95	10YR4/3d	SIL	strong, medium, angular blocky	medium, angular blocky	hard	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	30	54	16	7.1	3.2	1.1
Bm	18-28	2	28	44	28	7.0	0.9	0.2
Bt	28-76	1	13	51	36	7.2	0.6	0.6
Ck	76-95	2	12	64	24	7.4	0.2	15.7

(2) MUI PROFILE NO. P456-1

LOCATION	South Dumfries Township, Lot 36, Con. III, NTS Map Area 40P/1e, 17TNT 5457 7853.
ELEVATION	283 metres
SITE	Road ditch
LANDFORM AND PARENT MATERIALS	Very gently sloping till plain, dominantly silty clay loam textures.
SLOPE	3%
SOIL WATER REGIME	Moderately well drained, conductivity medium to low, saturation period moderately short.
STONINESS	Slightly stony
CLASSIFICATION	Brunisolic Gray Brown Luvisol, fine silty, mixed, neutral, strongly calcareous.
STATUS	Modal. Ck is lower in CaCO3 than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	SIL	moderate, medium, granular		friable	
Bm	18-33	10YR5/4m	SIL	moderate, medium, subangular blocky		firm	
Bt	33-79	10YR3/4m	SICL	moderate, medium, angular blocky		very firm	
Ck	79-90	10YR5/3m	SICL	coarse, subangular blocky		extremely firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	15	66	19	5.6	3.8	0.0
Bm	18-33	0	8	68	24	5.8	2.4	0.0
Bt	33-79	2	8	54	38	7.2	0.7	3.3
Ck	79-90	2	7	63	30	7.2	0.4	10.9

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm sandy textures over sandy loam or gravelly loam till.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	2	24	0	68	18	14	SL	7.7	6.9	0.3
Bmgj	2	32	0	87	9	4	S	0.9	6.8	0.1
Btgj	3	57	0	66	18	16	SL	0.7	6.9	0.5
2Ckg	3	86	3	34	46	20	L	0.5	7.3	14.5

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

OKL PROFILE NO. P180-1

LOCATION Burford Township, Lot 12, Con. VIII, NTS Map Area 40P/1d, 17TNT 5422 7685.

ELEVATION 265 metres

SITE Road ditch

LANDFORM AND PARENT MATERIALS Very gently sloping veneered till plain, dominantly loamy sand or sand 40 to 100 cm deep overlying loamy till.

SLOPE 2%

SOIL WATER REGIME Imperfectly drained, conductivity high, saturation period medium.

STONINESS Moderately stony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, sandy over loamy, mixed, neutral, strongly calcareous.

STATUS Variant. 2Ckg horizon is slightly higher in clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-28	10YR2/1m	FSL	weak, medium, granular		friable	
Bm	28-36	10YR6/3m	S	structureless		loose	
Btgj	36-46	10YR4/4m	LS	weak, medium, subangular blocky		very friable	few, faint, 10YR5/6m
Ckgj	46-59	10YR4/4m	SL	structureless		loose	few, faint, 10YR5/6m
2Ckg	59+	10YR5/2m	SIL	massive	coarse, blocky	very, firm	many, prominent, 10YR6/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-28	0	72	17	11	6.8	10.4	0.3
Bm	28-36	0	92	4	3	6.9	0.9	0.1
Btgj	36-46	5	85	8	6	7.0	1.0	0.9
Ckgj	46-59	7	63	27	10	7.3	0.2	0.5
2Ckg	59+	8	10	62	28	7.2	0.6	21.9

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Sandy lacustrine sediments, modified by eolian activity, consisting mainly of loamy sand and sand textures.

DRAINAGE Rapidly drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	20	0	83	12	5	LS	2.1	5.8	0.2
Bm	6	67	0	92	5	3	S	0.2	6.0	0.1
C	2		0	92	6	2	S	0.4	5.7	0.0

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

PFD PROFILE NO. P40-1

LOCATION Burford Township, Lot 16, Con. VI, NTS Map Area 40P/2a, 17TNT 5393 7706.

ELEVATION 260 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Level eolian modified lacustrine plain, dominantly loamy sand and sand textures.

SLOPE 0%

SOIL WATER REGIME Well drained, conductivity high, saturation period very short.

STONINESS Nonstony

CLASSIFICATION Orthic Melanic Brunisol, sandy, mixed, neutral, weakly calcareous.

STATUS Taxadjunct to Brunisolic Gray Brown Luvisol.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15	10YR3/2m	FLS	weak, medium, granular		loose	
Bm1	15-35	10YR4/4m	LS	weak, medium, granular		loose	
Bm2	35-55	10YR5/6m	S	structureless		loose	
Bm3	55-70	10YR4.5/4m	S	weak, medium, subangular blocky		loose	
Bmgj	70-123	10YR6/4m	S	weak, medium, subangular blocky		loose	few, 10YR5/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-15	0	78	15	7	6.9	2.4	0.4
Bm1	15-35	0	85	11	4	5.8	0.6	0.2
Bm2	35-55	0	92	4	4	5.5	0.2	0.1
Bm3	55-70	0	92	4	4	5.9	0.1	0.1
Bmgj	70-123	0	94	2	4	6.2	0.1	0.1

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Sandy textures 40 to 100 cm deep over sandy loam or gravelly loam till.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	20	0	43	43	14	L	4.3	7.1	0.5
Bm	1	43	0	64	25	11	SL	0.9	7.4	0.2
Bt	5	53	0	55	33	12	SL	0.6	7.2	0.4
2Ck	4		4	48	40	12	L	0.8	7.6	12.0

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

STD PROFILE NO. P179-1

LOCATION South Dumfries Township, Lot 38, Con. III, NTS Map Area 40P/1e, 17TNT 5447 7845.

ELEVATION 277 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Very gently sloping veneered till plain, dominantly sandy loam over loam glacial till.

SLOPE 1%

SOIL WATER REGIME Well drained conductivity high in sandy material, medium in loamy subsoil, saturation period short.

STONINESS Moderately stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, sandy over loamy, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-23	10YR2/2m	L	moderate, medium, granular		friable	
Bm	23-44	10YR4/4m, 10YR2/2m	FSL	weak, coarse, subangular blocky		friable	
Bt	44-64	10YR3/4m	SL	moderate, medium, subangular blocky		friable	
2Ck	64-100	10YR4.5/3m	L	strong, coarse, pseudo blocky		firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-23	0	37	48	15	7.4	4.4	1.5
Bm	23-44	0	64	25	11	7.4	0.8	0.2
Bt	44-64	0	64	26	10	7.4	0.3	0.2
2Ck	64-100	15	38	48	14	7.8	0.2	14.7

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Loam to gravelly loam till.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Apk	1	15	13	24	49	27	SIL	2.3	7.2	15.6
Bmk	1	40	21	33	51	17	GL	0.7	7.3	39.0
Ck	2		19	30	51	19	L	0.0	7.5	39.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

SNA PROFILE NO. 703

LOCATION Tuscarora Township, Lot 1, Con. III, NTS Map Area 40P/1a, 17TNT 5766 7616.

ELEVATION 210 metres

SITE Soil pit in cultivated field

LANDFORM AND PARENT MATERIALS Gently sloping drumlinized till, dominantly loam textures.

SLOPE 6%

SOIL WATER REGIME Well drained, conductivity medium, saturation period moderately short.

STONINESS Moderately stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, fine loamy, mixed, alkaline, strongly calcareous.

STATUS Variant. Higher $CaCO_3$ values than normal due to erosion at the site.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Apk	0-15	10YR4/2m	L	weak, medium, subangular blocky	weak, medium, granular	friable	
Bmk	15-40	7.5YR4/4m	GSIL	weak, medium, subangular blocky		friable	
Ck	40-50	10YR4/3m	SIL	massive	moderate, fine, subangular blocky	friable	

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

STN PROFILE NO. 684

LOCATION	Oakland Township, Lot 3, Con. VI, NTS Map Area 40P/1d, 17TNT 5507 7695.
ELEVATION	244 metres
SITE	Wooded
LANDFORM AND PARENT MATERIALS	Depressional swamp in sandy lacustrine deposit. Shallow, well decomposed, organic material 40 to 160 cm thick over sand.
SLOPE	0%
SOIL WATER REGIME	Very poorly drained, conductivity high, saturation period prolonged
STONINESS	Nonstony
CLASSIFICATION	Terric Humisol, humic, euic, sandy.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Oh1	0-25	5YR2.5/1m	humic organic	structureless			
Oh2	25-48	5YR2.5/1m	humic organic	structureless			
Oh3	48-60	5YR2.5/2m	humic organic	structureless			
2Ckg	60+	10YR5/1m	S	structureless		loose	10YR5/6m

Horizon	Depth cm	Rubbed Fibre Content %	Field Water Content %	Bulk Density gm/cm^3
Oh1	0-25	10	41	0.17
Oh2	25-48	5	62	0.19
Oh3	48-60	4	67	0.14

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL — Clayey lacustrine sediments consisting of clay and heavy clay textures.

DRAINAGE — Moderately well drained

USUAL CLASSIFICATION — Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	15	0	3	58	39	SICL	6.0	6.8	0.2
2Bm	2	32	0	1	41	58	SIC	1.8	4.9	0.0
2Bt	2	50	0	1	32	67	HC	0.8	6.2	0.1
2Ck	1		0	1	29	70	HC	0.7	7.4	8.1

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

SHV PROFILE NO. P498-1

LOCATION — Onondaga Township, Lot 25, Con. II, NTS Map Area 40P/1a, 17TNT 5796 7745.

ELEVATION — 206 metres

SITE — Road side ditch

LANDFORM AND PARENT MATERIALS — Hummocky dissected lacustrine plain, dominantly silty clay and heavy clay varved sediments.

SLOPE — 9%

SOIL WATER REGIME — Moderately well drained, conductivity slow, saturation period moderately short.

STONINESS — Nonstony

CLASSIFICATION — Brunisolic Gray Brown Luvisol, fine clayey, mixed, neutral, strongly calcareous.

STATUS — Variant. Ck horizon is lower in $CaCO_3$ than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-15	10YR3.5/2m	SICL	strong, medium, granular		friable	
2Bm1	15-28	10YR7/3d, 10YR5/4m	SIC	medium, subangular blocky	medium, platy	firm	
2Bm2	28-36	10YR7/3m, 10YR4/3m	HC	medium, angular blocky		firm	
2Bt1	36-43	10YR4/4m	HC	strong, medium, angular blocky	fine, angular blocky	very firm	
2Bt2	43-56	10YR4/2m	HC	prismatic	medium, angular, blocky	very firm	
2Ck	56-98	10YR4/2m	HC	coarse, angular, blocky	medium, angular blocky	extremely firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-15	0	3	59	38	6.8	6.0	0.2
2Bm1	15-28	0	1	51	48	5.0	2.5	0.0
2Bm2	28-36	0	1	30	68	4.7	0.9	0.0
2Bt1	36-43	0	1	35	65	5.6	0.8	0.0
2Bt2	43-56	0	0	30	70	6.7	0.8	0.1
2Ck	56-98	0	1	28	70	7.4	0.7	8.1

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

SYX PROFILE NO. 681

LOCATION	Burford Township, Lot 4, Con. V, NTS Map Area 40P/1e, 17TNT 5453 7747.
ELEVATION	253 metres
SITE	Sedge area
LANDFORM AND PARENT MATERIALS	Depressional fen in fluvial deposits. Thick organic deposit greater than 160 cm.
SLOPE	0%
SOIL WATER REGIME	Very poorly drained, conductivity high, saturation period prolonged.
STONINESS	Nonstony
CLASSIFICATION	Typic Humisol, humic, euic.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Oh1	0-15	5YR2/1m	humic organic	very fine, granular		friable	
Oh2	15-150	5YR2/1m	organic	structureless			
Oh3	150+	5YR2/2m	humic organic	structureless		friable	

Horizon	Depth cm	Rubbed Fibre Content %	Field Water Content %	Bulk Density gm/cm^3
Oh1	0-15	3	57	0.17
Oh2	15-150	11	66	0.11
Oh3	150+	9	68	0.12

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm silty or loamy textures over coarse fluvial sediments consisting of gravelly sand or gravel.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	22	1	39	50	11	L	3.5	7.1	0.9
Bm	5	46	0	37	54	9	SIL	0.7	6.8	0.0
Bt	6	77	4	47	30	23	L	0.7	6.4	0.4
2Ck	1		73	78	14	8	GLS	0.5	7.4	22.0

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

TEW PROFILE NO. P370-1

LOCATION South Dumfries, Lot 28, Con. IV, NTS Map Area 40P/1e, 17TNT 5494 7870.

ELEVATION 268 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Very gently sloping veneered glaciofluvial plain, dominantly silty textures 40 to 100 cm deep over gravel and gravelly sand.

SLOPE 1%

SOIL WATER REGIME Well drained, conductivity high, saturation period very short.

STONINESS Slightly stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, coarse loamy over sandy skeletal, mixed, neutral, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-13	10YR3/2.5m	SIL	moderate, medium, granular		friable	
Bm	13-35	10YR4/4m	SIL	coarse, subangular blocky	medium, granular	friable	
Bt	35-50	7.5YR3/2m	CL	coarse, subangular blocky	fine, subangular blocky	friable	
2Ck	50+	10YR4/3m	GLS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-13	0	33	55	12	7.2	3.5	0.9
Bm	13-35	0	26	62	11	6.9	0.8	0.0
Bt	35-50	7	21	39	40	7.1	0.9	1.6
2Ck	50+	73	79	14	7	7.4	0.5	21.9

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Clayey lacustrine sediments consisting of silty clay loam or silty clay textures.

DRAINAGE Poorly drained

USUAL CLASSIFICATION Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	21	0	16	45	39	SICL	5.4	6.8	0.7
Bg	6	46	0	9	46	45	SIC	1.8	6.9	0.4
Ckg	6		0	4	55	41	SIC	0.6	7.5	15.7

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

TLD PROFILE NO. P545

LOCATION Brantford Township, Lot 3, Con. II, NTS Map Area 40P/1c, 17TNT 5595 7664.

ELEVATION 229 metres

SITE Road ditch

LANDFORM AND PARENT MATERIALS Level lacustrine plain, dominantly silty clay loam and silty clay textures.

SLOPE 0%

SOIL WATER REGIME Poorly drained, conductivity slow, saturation period prolonged.

STONINESS Nonstony

CLASSIFICATION Orthic Humic Gleysol, fine clayey, mixed, alkaline, strongly calcareous.

STATUS Variant. Clay contents are lower than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR3/2m	L	moderate, fine, granular		friable	
Bg	20-41	10YR5/2m	CL	coarse, subangular blocky	medium and fine, angular blocky	firm	many, fine, 7.5YR5/6m
Ckg1	41-58	10YR5/1m 10YR4/2d	SICL	moderate, medium, subangular blocky	medium, angular blocky	firm	many, fine, 10YR5/6m
Ckg2	58-100	10YR5/1m	SICL	coarse blocky	medium, angular blocky	very firm	many, fine, 10YR5/6

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	49	29	22	7.1	4.4	1.6
Bg	20-41	0	23	45	32	7.3	1.7	0.6
Ckg1	41-58	0	10	59	31	7.5	0.3	19.8
Ckg2	58-100	0	2	64	34	7.5	0.4	25.0

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Stratified, loamy lacustrine sediments consisting of silt loam or very fine sandy loam textures.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	24	0	37	51	12	SIL	3.0	7.2	1.0
Bmgj	2	45	0	54	39	7	SL	0.6	7.3	1.7
Btgj	3	52	0	36	43	21	L	0.7	7.3	1.7
Ckgj	2		0	72	24	4	SL	0.0	7.6	9.6

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

TUC PROFILE NO. P372-1

LOCATION South Dumfries Township, Lot 30, Con. III, NTS Map Area 40P/1e, 17TNT 5484 7867.

ELEVATION 270 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Level lacustrine plain, dominantly silt loam stratified sediments.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity medium to low, saturation period medium.

STONINESS Nonstony

CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol, coarse loamy, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	SIL	moderate, medium, granular		friable	
Bmgj	18-28	10YR6/3m	SIL	medium, subangular blocky	granular	friable	few, distinct, 10YR7/6m
Btgj1	28-48	10YR5/4m	SIL	medium, subangular blocky		firm	common, distinct, 10YR6/6m
Btgj2	48-60	10YR5/3m	CL	medium, subangular blocky		firm	many, distinct, 10YR6/6m
Ckgj	60-100	10YR5/4m	L	coarse, subangular blocky		friable	many, prominent, 10YR6/8m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	0	23	64	13	7.3	3.2	2.2
Bmgj	18-28	0	32	55	13	7.1	1.1	0.0
Btgj1	28-48	0	28	55	17	7.3	0.6	3.1
Btgj2	48-60	0	33	34	33	7.5	0.4	2.2
Ckg	60-100	0	50	42	8	7.6	0.0	11.2

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

VSS PROFILE NO. P181

LOCATION	Burford Township, Lot 5, Con. XIV, NTS Map Area 40P/1d, 17TNT 5485 7615.
ELEVATION	253 metres
SITE	Soil pit in road allowance
LANDFORM AND PARENT MATERIALS	Very gently sloping veneered till plain, dominantly loamy sand and sandy loam textures 40 to 100 cm deep over loam till.
SLOPE	2%
SOIL WATER REGIME	Poorly drained, conductivity high in sandy material, medium in loamy subsoil, saturation period long
STONINESS	Nonstony
CLASSIFICATION	Humic Luvic Gleysol, coarse loamy, mixed, neutral, strongly calcareous.
STATUS	Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR2/1m, 10YR4/1d	FSL	weak, fine, granular		friable	
Bg	20-28	10YR6/3.5m	FLS	weak, medium, subangular blocky		loose	few, 10YR5/8m
Btg	28-58	10YR4/4m	SL	moderate, medium,. subangular blocky		friable	common, 10YR5/8m
2Btg	58-63	10YR5/2m	CL	medium, angular blocky		firm	common, 5YR4/4m
2Ckg	63+	2.5Y6/2m	L	medium, angular blocky		firm	many, 10YR4/4m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	64	19	17	6.9	5.0	0.3
Bg	20-28	0	82	13	5	6.6	0.8	0.0
Btg	28-58	0	74	12	14	6.6	0.8	0.0
2Btg	58-63	0	38	35	27	7.0	0.4	0.6
2Ckg	63+	9	30	47	23	7.3	0.6	22.2

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Sandy lacustrine sediments modified by eolian activity, consisting mainly of loamy sand and sand textures.

DRAINAGE Imperfectly drained

USUAL CLASSIFICATION Gleyed Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	3	16	0	82	13	5	LS	4.0	5.8	0.2
Bmgj	8	57	0	88	7	5	S	0.9	6.4	0.1
Ckg	3		0	87	8	5	S	0.2	7.2	5.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WAM PROFILE NO. P41-1

LOCATION Burford Township, Lot 14, Con. VI, NTS Map Area 40P/2a, 17TNT 5384 7705.

ELEVATION 262 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Level eolian modified lacustrine plain, dominantly loamy sand and sand textures.

SLOPE 0%

SOIL WATER REGIME Imperfectly drained, conductivity high, saturation period medium.

STONINESS Nonstony

CLASSIFICATION Gleyed Orthic Melanic Brunisol, sandy, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-10	10YR2/2m	SL	weak, medium, granular		loose	
Bm1	10-18	7.5YR3/2m	LS	structureless		loose	
Bm2	18-33	7.5YR5.5/6m	S	structureless		loose	
Bmgj1	33-50	10YR5/6m	S	weak, coarse, subangular blocky		very friable	coarse, faint, 5YR4/6
Bmgj2	50-63	10YR5.5/4	S	weak, coarse, subangular blocky		very friable	many, coarse, prominent, 5YR4/4m
Bm3	63-80	10YR5/4m	S	structureless		loose	
Bm4	80-90	10YR4/4m	S	structureless		loose	
Ck	90-123	10YR5.5/3m	S	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-10	0	75	18	7	7.0	8.2	0.5
Bm1	10-18	0	80	15	5	6.2	4.8	0.0
Bm2	18-33	0	87	11	2	5.4	0.9	0.0
Bmgj1	33-50	0	89	7	4	6.0	0.5	0.2
Bmgj2	50-63	0	91	5	4	6.8	0.0	0.0
Bm3	63-80	0	92	5	3	7.1	0.0	0.1
Bm4	80-90	0	90	4	5	7.4	0.2	0.2
Ck	90-123	0	94	4	2	7.6	0.1	15.6

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL — Sandy lacustrine sediments consisting mainly of loamy sand and sand textures.

DRAINAGE — Poorly drained

USUAL CLASSIFICATION — Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	25	0	74	18	8	SL	4.2	6.8	0.1
Bg	10	71	0	89	7	4	LS	0.2	6.7	0.1
Ckg	3		0	91	7	2	S	0.1	7.5	13.0

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WRN PROFILE NO. P42-1

LOCATION — Burford Township, Lot 16, Con. I, NTS Map Area 40P/2h, 17TNT 5366 7772.

ELEVATION — 274 metres

SITE — Soil pit in road allowance

LANDFORM AND PARENT MATERIALS — Level eolian modified glaciolacustrine plain, dominantly sand and loamy sand textures.

SLOPE — 0%

SOIL WATER REGIME — Poorly drained, conductivity high, saturation period prolonged.

STONINESS — Nonstony

CLASSIFICATION — Orthic Humic Gleysol, sandy, mixed, neutral, weakly calcareous.

STATUS — Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR2/2m	SL	weak, fine, subangular blocky		very friable	
Bg1	20-35	2.5YR4.5/2m	S	structureless		loose	few, prominent, 10YR6/8m
Bg2	35-70	10YR4/1m, 10YR5/2m	S	structureless		loose	
Bg3	70-90	10YR4/2m	S	structureless		loose	
Bg4	90-112	10YR4/2m	S	structureless		loose	many, prominent, 5YR3/4m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	77	14	9	6.9	7.2	0.0
Bg1	20-35	0	90	7	3	6.6	0.3	0.1
Bg2	35-70	0	93	4	3	6.7	0.0	0.0
Bg3	70-90	0	93	4	3	6.8	0.1	0.0
Bg4	90-112	0	95	2	2	6.9	0.0	0.0

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Loamy lacustrine sediments consisting of very fine sandy loam and loamy very fine sand textures.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	10	0	75	19	7	SL	4.3	7.0	0.2
Bm	2	34	0	82	14	4	LS	0.5	5.6	0.1
Bt	1	64	0	73	17	10	SL	0.6	6.2	0.0
Ck	1		0	93	4	3	S	0.0	7.5	11.8

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WTO PROFILE NO. P45

LOCATION Oakland Township, Lot 1, Con. II, NTS Map Area 40P/1c, 17TNT 5510 7650.

ELEVATION 241 metres

SITE Road ditch

LANDFORM AND PARENT MATERIALS Gently sloping, dissected lacustrine plain, dominantly loamy fine sand and fine sand textures.

SLOPE 6%

SOIL WATER REGIME Well drained, conductivity medium, saturation period short.

STONINESS Nonstony

CLASSIFICATION Brunisolic Gray Brown Luvisol, coarse loamy, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-10	10YR3/3m	FSL	weak, medium, granular		loose	
Bm1	10-25	10YR5/4m	FLS	weak, medium, subangular blocky		loose	
Bm2	25-43	10YR5/3m	FLS	weak, medium, subangular blocky		loose	
Bt	43-64	10YR4/4m	FSL	weak, medium, subangular, blocky		friable	
Ck	64-74	10YR5.5/3m	FS	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-10	0	75	18	7	7.0	4.3	0.2
Bm1	10-25	0	83	13	4	6.0	0.7	0.0
Bm2	25-43	0	82	14	4	5.3	0.3	0.1
Bt	43-64	0	73	17	10	6.2	0.6	0.0
Ck	64-74	0	93	4	3	7.4	0.0	11.5

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm sandy textures over silty clay loam or silty clay lacustrine or glacial till deposits.

DRAINAGE Poorly drained

USUAL CLASSIFICATION Orthic Humic Gleysol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	1	23	0	68	23	9	SL	2.6	7.0	0.4
Bg	1	46	0	86	6	8	LS	0.2	6.9	0.1
2Btg	1	71	0	25	46	30	CL	0.4	6.8	0.0
2Ckg	1		13	31	46	23	L	0.2	7.3	14.7

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WUS.T PROFILE NO. P215-1

LOCATION Burford Township, Lot 24, Con. I, NTS Map Area 40P/2h, 17TNT 5319 7771.

ELEVATION 290 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Very gently sloping veneered till plain, dominantly sandy loam and loamy sand textures 40 to 100 cm deep over clay loam till.

SLOPE 1%

SOIL WATER REGIME Poorly drained, conductivity medium to low, saturation period prolonged.

STONINESS Nonstony

CLASSIFICATION Humic Luvic Gleysol, sandy over fine loamy, mixed, neutral, strongly calcareous.

STATUS Variant. 2Ckg horizon is lower in clay content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-23	10YR3/1m	FSL	moderate, medium, subangular, blocky		friable	
Bm	23-46	10YR5/8m	LS	weak, medium, subangular blocky		loose	
2Btg	46-74	10YR5/3m 5Y6/1m	CL	coarse, subangular blocky		very firm	many, prominent, 7.5YR5/6m
2Ckg	74-96	5Y5/1m	L	coarse, pseudo blocky		very firm	many, prominent, 10YR5/6m

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-23	0	68	23	9	7.0	2.5	0.4
Bm	23-46	0	86	6	8	6.9	0.2	0.1
2Btg	46-74	0	25	46	29	6.8	0.4	0.0
2Ckg	74-96	13	31	46	23	7.3	0.2	14.7

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL Gravelly and stony till deposits consisting of gravelly sandy loam textures.

DRAINAGE Rapid and well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	4	20	4	40	47	13	L	3.5	7.0	0.2
Bm	3	30	9	44	44	12	L	1.2	5.9	0.8
Bt	4	62	17	39	43	18	L	0.5	6.8	4.3
Ck	4		33	57	35	8	GSL	0.3	7.5	23.6

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WIL PROFILE NO. P293-1

LOCATION South Dumfries Township, Lot 29, Con. VI, NTS Map Area 40P/8d, 17TNT 5483 7900.

ELEVATION 302 metres

SITE Road ditch

LANDFORM AND PARENT MATERIALS Moderately sloping hummocky moraine, dominantly gravelly sandy loam textures.

SLOPE 12%

SOIL WATER REGIME Well drained, conductivity high, saturation period very short.

STONINESS Very stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, coarse loamy, mixed, alkaline, strongly calcareous.

STATUS Variant. Upper solum is lower in sand content than normal.

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-18	10YR3/2m	L	medium, subangular blocky	medium, granular	friable	
Bm	18-36	10YR5/3m	SL	coarse, subangular blocky		friable	
Bt	36-64	7.5YR4/4m	L	medium and coarse, subangular blocky	weak, medium, granular	friable	
Ck	64-100	10YR5/4m	GSL	structureless		loose	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-18	3	46	43	11	7.0	3.0	0.3
Bm	18-36	6	54	37	9	6.8	0.8	0.1
Bt	36-64	0	46	34	20	6.8	0.3	0.3
Ck	64-100	54	71	24	5	7.5	0.3	19.5

GENERALIZED PROFILE CHARACTERISTICS

PARENT MATERIAL 40 to 100 cm loamy or silty sediments over loamy till.

DRAINAGE Well drained

USUAL CLASSIFICATION Brunisolic Gray Brown Luvisol

MEAN HORIZON VALUES

Horizon	No. of Samples	Depth at Horizon Base(cm)	Gravel %	Sand %	Silt %	Clay %	Texture	O.M. %	pH $CaCl_2$	$CaCO_3$ %
Ah	5	22	0	27	58	15	SIL	3.9	7.1	0.4
Bm	2	36	0	23	63	14	SIL	1.0	7.0	0.1
Bt	5	53	0	31	47	22	L	0.8	7.2	0.4
2Ck	8		4	34	52	14	SIL	0.4	7.6	14.4

DETAILED PROFILE DESCRIPTIONS AND ANALYSES

WOW PROFILE NO. P358-1

LOCATION South Dumfries Township, Lot 34, Con. IV, NTS Map Area 40P/1e, 17TNT 5464 7864.

ELEVATION 287 metres

SITE Soil pit in road allowance

LANDFORM AND PARENT MATERIALS Very gently sloping veneered till plain, dominantly silt loam textures 40 to 100 cm deep over loam glacial till.

SLOPE 2%

SOIL WATER REGIME Well drained, conductivity medium, saturation period short.

STONINESS Slightly stony

CLASSIFICATION Brunisolic Gray Brown Luvisol, fine loamy, mixed, alkaline, strongly calcareous.

STATUS Modal

Horizon	Depth cm	Colour moist dry	Texture	Primary Structure	Secondary Structure	Consistence	Mottles
Ah	0-20	10YR3/2m	SIL	medium, granular		friable	
Bm	20-43	10YR5/3m	SIL	medium, subangular blocky	medium, granular	friable	
Bt1	43-60	10YR4/3m	SIL	coarse, subangular blocky	fine, subangular blocky	friable	
Bt2	60-74	10YR3.5/4m	SIL	coarse, subangular blocky	medium, angular blocky	firm	
2CK	74+	10YR5.5/4m	SIL	coarse, subangular blocky		firm	

Horizon	Depth cm	Grav. >2mm %	Sand %	Silt %	Clay %	pH $CaCl_2$	Organic Matter %	$CaCO_3$ Equiv. %
Ah	0-20	0	27	58	15	7.0	4.5	0.7
Bm	20-43	0	25	62	13	6.8	1.5	0.1
Bt1	43-60	0	32	53	15	6.7	0.7	0.1
Bt2	60-74	0	30	50	20	6.9	0.6	0.1
2Ck	74+	6	26	60	14	7.5	0.4	14.3

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