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Nova Scotia Department of Agriculture and Marketing

SOILS OF THE NORTHUMBERLAND SHORE AREA OF NOVA SCOTIA

CANADA/NOVA SCOTIA
AGRI-FOOD INDUSTRY
DEVELOPMENT AGREEMENT
1982-1987

Canada

Report No. 24
Nova Scotia Soil Survey

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PREFACE

This report contains soil data in prose, tabular and map form for 54 000 ha of the Northumberland Shore Area of Nova Scotia. The aim is to provide information at a semi-detailed level (1:20 000) to aid development of the agricultural land base.

Part 1 contains a general description of the survey area including physiography, climate, vegetation, and land use. Part 2 contains survey, mapping and laboratory methods. Soil materials, landform, and soil profile characteristics are given in Part 3. Part 4 contains interpretations of map units for selected agricultural crops.

This publication is Report No. 24 of the Nova Scotia Soil Survey. It is one of a series of three soil surveys of significant agricultural areas of Nova Scotia. All three were funded under the Canada/Nova Scotia Agri-Food Development Agreement.

The soil maps, legend and report each provide complementary information. To manually retrieve map information, the following steps are suggested:

1. Locate the area of interest on the soil map, using the key map if necessary.

2. Note the map unit symbols in the area of interest.

3. If soil attribute information is required, interpret the symbols using the legend and the sample symbol found on it. For more specific information on the soils, consult the section entitled SOIL AND MAP UNIT DESCRIPTIONS. Soils are listed there in alphabetical order by symbol, not name.

4. If soil interpretive information is required, find the map unit symbols in the appropriate tables in the section entitled SOIL INTERPRETATIONS.

For maps in digital form or for raw analytical data, request help from Canada-Nova Scotia Soil Survey located at the Nova Scotia Agricultural College, Truro or from the Land Resource Research Centre in Ottawa.

PART 1. GENERAL DESCRIPTION OF THE AREA

Location and extent

The survey area is in northern Cumberland, Colchester and Pictou Counties, Nova Scotia. It extends from Pictou westward to Amherst Shore just east of Amherst Head. The area is located between 63^{o} 57' to 62^{o} 42' west longitude and 45^{o} 21' and 44^{o} 35' north latitude.

The project includes 21 full or partial map sheets and encompasses about 54 000 ha (Fig. 1). Each full map sheet is 3 000 ha.

Physiography

The survey area (Fig. 2) is north of the Cobequid Mountains in the physiographic region known as the Pictou - Cumberland Plain (Goldthwait 1924) or the Northumberland Lowlands (Roland 1982). The region extends into New Brunswick and Prince Edward Island.

The Northumberland Lowlands occur as a gently undulating plain underlain by bedrock formed during the Upper Carboniferous period. The overlying glacial till is derived from the bedrock and rarely exceeds 3 m in thickness. Gypsum and salt deposits of the Windsor Groups come to the surface where the crests of anticlines have been eroded in central Cumberland County, thus creating salt intrusions. Exposures of the Canso, Cumberland and Riversdale Groups are limited, with most of the area consisting of the Pictou Group which is composed mainly of sandstones (Keppie 1979). The Pictou Group forms a band from the New Brunswick border to the town of Pictou (Fig. 3). Rocks of this Group are finer and redder than the grey sandstones and shales of the other groups. They also produce redder soils. Some coal deposits associated with the Cumberland Group are present in central Cumberland County.

Two main east - west trending anticlines cross the region, one from Pugwash Harbour west to Nappan and the other from Malagash Point west, past Oxford, then southward to Springhill. There is also a series of minor folds which run in an east - west direction. This has created the alternating ridges and valleys which are a dominant feature of the Northumberland Lowlands. The ridges are often gentle swells but may rise 60 to 120 m or more above the general landscape. Alternating ridges and valleys also determine the outline of the coast along the Northumberland Strait (Roland 1982). The ridges run out into points of land and the valleys form inlets and harbours.

INDEX TO MAP SHEETS
NORTHUMBERLAND SHORE PROJECT AREA
NOVA SCOTIA

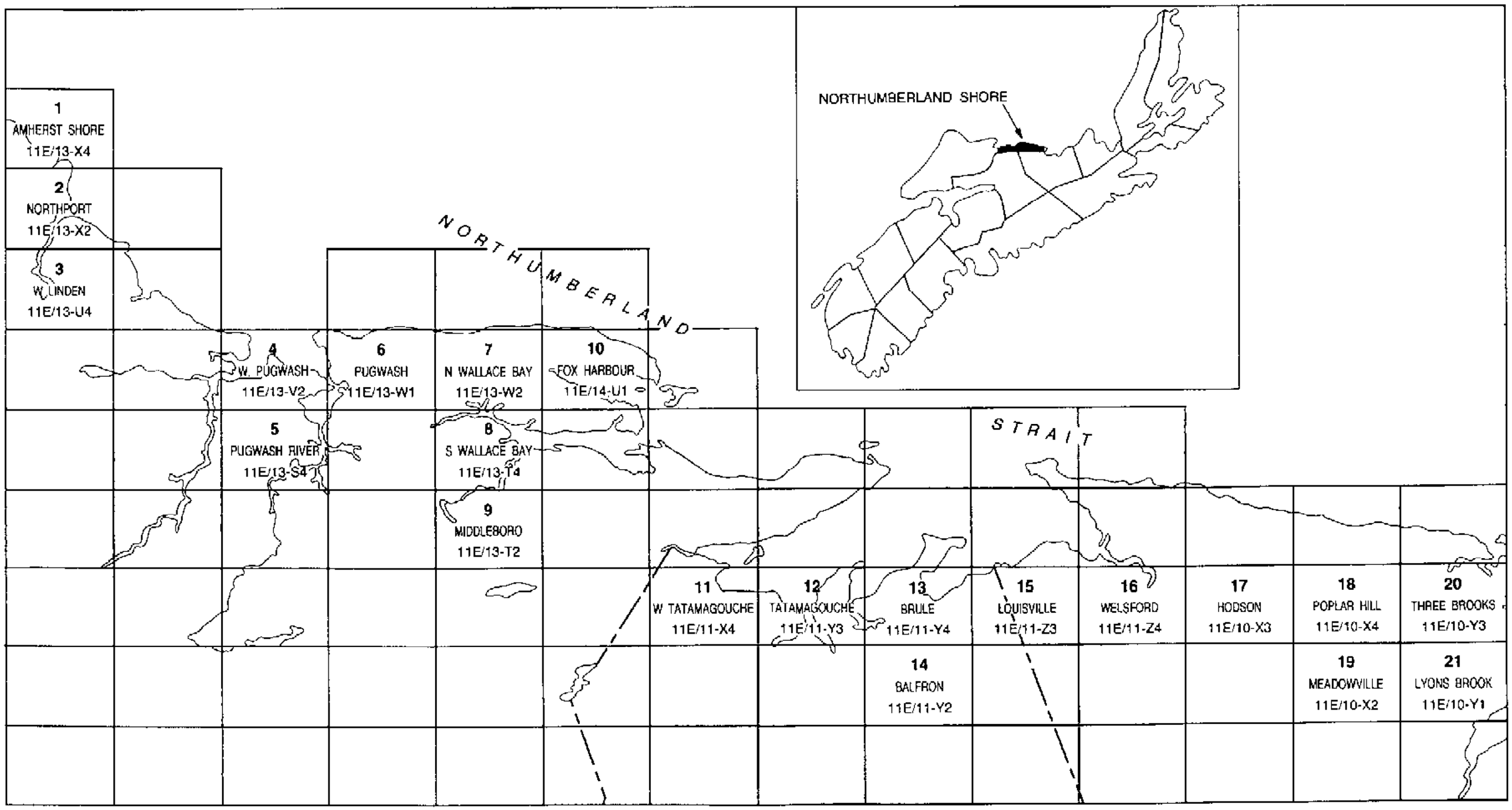
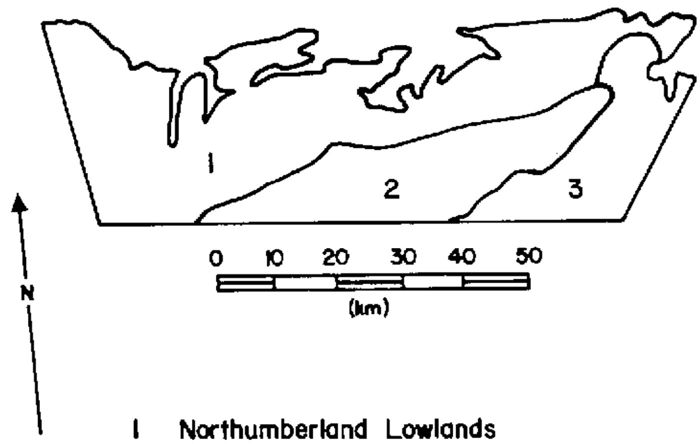


Figure 1. Location of map sheets

Prepared by the Information Systems and Cartography Unit, Land Resource Research Centre, Agriculture Canada, 1988.



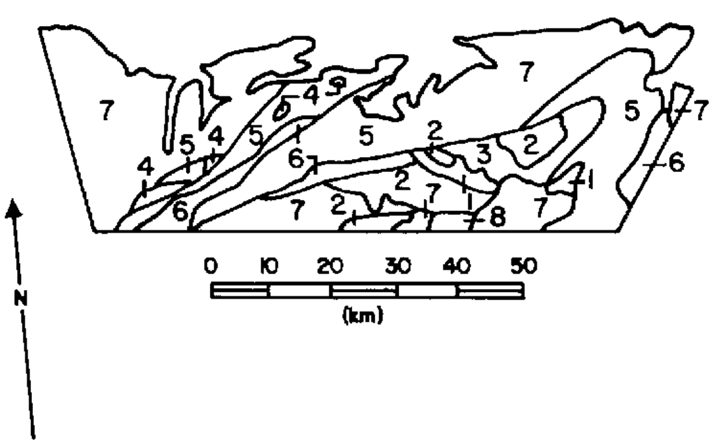
1 Northumberland Lowlands

2 Cobequid Uplands

3 Pictou Basin

(Roland, 1982)

Figure 2. Physiographic regions.



Silurian

1 White Rock, Kentville, New Canaan

Devonian

2 Granite

3 Torbrook

Carboniferous

4 Windsor

5 Riversdale, Canso

6 Cumberland

7 Pictou

(Keppie, 1979)

Figure 3. Bedrock geology and formations.

Fine loamy soil materials commonly occur east of River John, suggesting the presence of shale bedrock in the ridges instead of the sandstone found farther west. The coarse fragment content in this area is usually less than 15%. West of River John, the ridges generally have coarse loamy materials with coarse fragment contents up to 25%. Valleys and lower slopes of the ridges throughout the survey area typically have coarse loamy soil materials and a coarse fragment content ranging from 5 to 50%. Coarse fragments consist mainly of weathered sandstone which breaks down easily, making an accurate determination of the gravel content difficult. The composition of the fines found throughout the Northumberland Lowlands is in the following ranges: clay 5-30%, silt 30-50%, sand 30-80%.

The tills of the area are nearly always tightly compacted (bulk density >1.6 g/cm^3) beginning at the 30 to 60 cm depth. Glaciofluvial (esker, kame, and outwash plain) deposits are also present within the Northumberland Lowlands (Roland 1982), usually in the northern portions of the survey area along the Northumberland Strait.

The folding pattern of the strata has also affected the drainage systems of the Lowlands. Lakes are few and generally elongated and shallow (Roland 1982). Streams lie on gentle topography and branch irregularly to form dendritic drainage patterns.

Climate

Nova Scotia has a modified temperate climate with long, cold winters and short warm summers (Dzikowski 1984). The Northumberland Shore climatic region (Fig. 4) is characterized by a delayed spring, a warm summer and fall, and the lowest precipitation in the province. By comparison, the Annapolis Valley has the warmest temperatures and the second lowest precipitation in the province.

There are only two weather stations in the survey area. They are at Tatamagouche and Pugwash (Fig. 5). Table 1 provides summary climatic data for the area.

The type of crops that can be grown and the varieties of those crops are determined by the frost free period and the available degree days or heat units. Heat units and growing degree days are based on threshold temperatures below which plants do not grow. For perennial plants, a threshold temperature of 5^oC is most valid, while for tender, heat-loving plants, such as tomatoes and beans, a base temperature of 10^oC is more appropriate (Dzikowski 1984). The frost free period for the survey area is usually greater than 110 days. The growing degree days over 5^oC range from 1700-1800 and the degree days over 10^oC range from 800-1000.

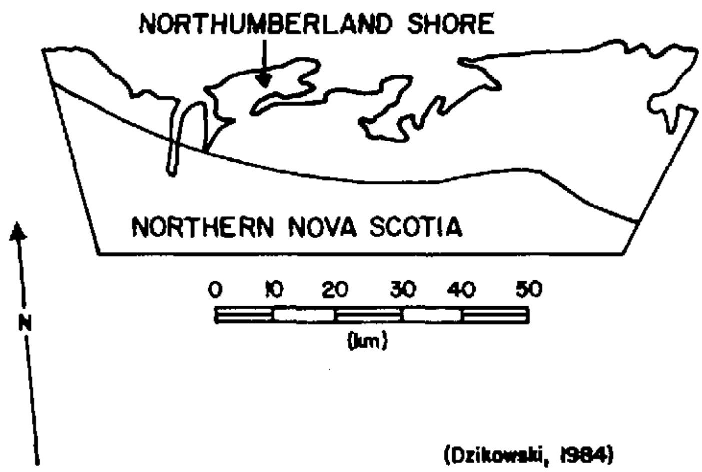


Figure 4. Climatic regions.

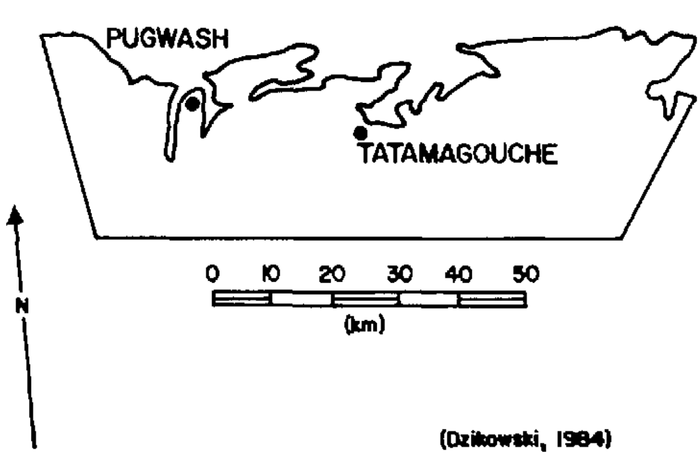


Figure 5. Weather stations.

Table 1. Summary climatic data

total ppt.:	1 100-1 200 mm
May-Sept. ppt.:	375-400 mm
degree days over 5°C:	1 700-1 800
degree days over 10°C:	800-1 000
growing season:	190-200 days
start of growing season:	Apr. 20-25
end of growing season:	Nov. 1-6
last spring frost:	before May 30
first fall frost:	after Sept 30
av frost free period:	>110 days
corn heat units:	2 100-2 300
mean Jan. temp.:	-5 to -6°C
Jan. extreme minimum:	-25 to -30°C
mean July temp.:	18 to 19°C
July extreme maximum:	30 to 35°C
frost free period:	110-130 days

Source: Dzikowski 1984.

Vegetation and land use

Loucks (1961) classified the Maritime Provinces into forest zones, ecoregions and site districts. Forest zones are defined by the predominant tree species; ecoregions by similar ecological relationships between site and species; and districts by physical patterns of relief, predominant soil texture, bedrock type or drainage patterns.

The survey area is within the Red Spruce-Hemlock-Pine Zone and has red spruce and hemlock as the dominant tree species. This zone is further subdivided into the Northumberland Shore and the Oxford Districts (Fig. 6).

Imperfectly drained coarse to fine loamy soils predominate in the both districts. These soils support black spruce, jack pine, balsam fir, white spruce, red spruce and red maple. Hemlock and white pine are found throughout the Northumberland Shore district on moderately well drained sandy soils. Moderately well drained sandy soils of the Oxford District support yellow birch, sugar maple, beech, aspen and wire birch. In areas of repeated disturbances or abandoned farmlands, and where soil drainage usually ranges from moderately well to imperfect, the common aggressors are witherods, rhodora, sheep laurel, mountain-holly, and speckled alder. Tamarack and black spruce commonly occur on poorly drained soils and extensive bog land. On moderately well drained soils, stands of beech and sugar maple are common (Loucks 1961). Table 2 shows the common and scientific names of plant species mentioned in this report.

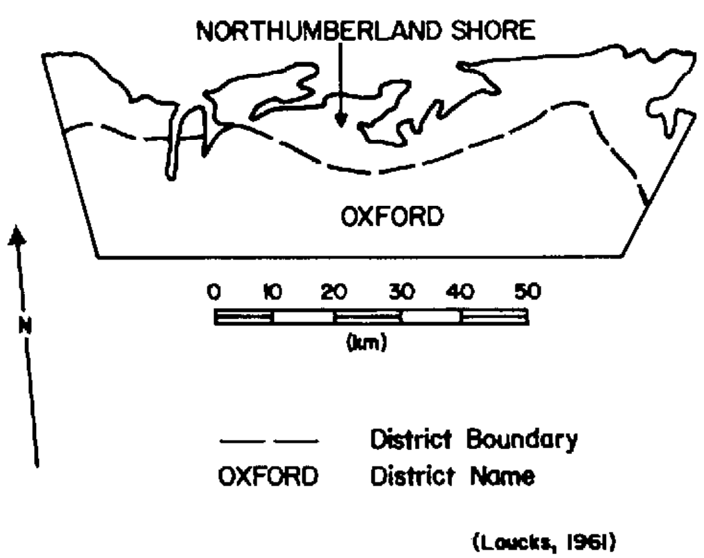


Figure 6. Forest site districts in survey area.

Common understory species of the district are wintergreen, goldthread, naked miterwort, bunchberry, bristly clubmoss, sphagnum and Schreber's moss (Loucks 1961). Wood sorrel, mountain maple, and wood fern are also present.

Table 2. Common and scientific names of plant species

Trees

Common name	Latin name
alder, speckled	*Alnus rugosa* (DuRoi) Spreng.
beech	*Fagus grandifolia* Ehrh.
fir, balsam	*Abies balsamea* (L.) Mill.
hemlock, eastern	*Tsuga canadensis* (Endl.) Carr.
maple, mountain	*Acer spicatum* Lam.
maple, red	*Acer rubrum* L.
maple, sugar	*Acer saccharum* Marsh.
pine, eastern white	*Pinus strobus* L.
pine, jack	*Pinus banksiana* Lamb.
spruce, black	*Picea mariana* (Mill.) BSP.
spruce, red	*Picea rubens* Sarg.
spruce, white	*Picea glauca* (Moench) Voss
tamarack (larch)	*Larix laricina* (Duroi) K. Koch

Other plants

Common name	Latin name
clubmoss	*Lycopodium annotinum* L.
fern, wood	*Dryopteris spinulosa* (O.F. Muell)Watt
mountain-holly	*Nemopanthus mucronatus* (L.) Trel.
rhodora	*Rhododendron canadense* (L.) Torr.
Schreber's moss	*Pleurozium schreberi*
sheep laurel	*Kalmia angustifolia* L.
sphagnum mosses	*Sphagnum* spp.
wintergreen	*Gaultheria procumbens* L.

According to the Canada Department of Forestry and Rural Developement (1967), 75% of the Northumberland Shore survey area is productive forest. The remainder is used for agricultural purposes or is recently abandoned farmland.

A Nova Scotia Department of Municipal Affairs (1979) study shows that small amounts of feed grains, corn and canola are grown throughout the survey area. Speciality crops such as raspberries and grapes are grown near the coast. The most extensive agricultural land use, however, is pasture and forage crop production. There is an increasing amount of abandoned farmland on the North Shore partly because of decreased markets for livestock products. A trend toward larger, more specialized operations has also decreased the population of the farming community.

PART 2. SURVEY METHODS

Mapping methods

Soil survey staff (LRRC, Truro) reviewed previously published soil maps and geology maps to establish a legend. Maritime Testing staff then drew preliminary soil boundaries on 1:10 000 scale black and white aerial photographs using a stereoscope. They field checked by digging 40x40 cm pits with a spade to a depth of 60 cm and augering to 100 cm wherever possible. Soil drainage was determined using indicators such as soil colour; presence of mottles; depth, size and brightness of the mottles; gleyed horizons and presence or absence of a water table. Soil texture was estimated by feel, percent slope using a clinometer, stoniness and rockiness classes with percentage area charts, and soil transmissibility using Wang et al. (1985).

There were a total of 4500 field checks -- 250 per full orthophoto map sheet (3 000 ha) or 1 site per 12 ha. Information was recorded on field data sheets designed for the purpose (Fig. 7) and followed standard coding conventions (Day 1982). The sites were chosen in one of three ways:

1. Reconnaissance transects. After pretyping, the surveyor placed transects across the grain of the landscape to traverse as many soil delineations as possible.

2. Free sites. These were used at the surveyor's discretion to inspect areas not given adequate representation by the reconnaissance transects. The Scientific Authority (SA) requested additional free sites in anomalous areas.

3. Delineation transects. After each map was completed, the SA placed transects in randomly selected delineations according to Wang (1982). Maritime Testing staff field checked the sites with the objective of improving our understanding of area soil-landscape relations thus allowing improvements to the legend.

Initially, 100 sites per full map sheet were used for delineation transects. This was dropped to 50, and then to zero as confidence in the legend grew. The final allocation per full map sheet was 180 sites for reconnaissance, 46 initial free sites, and 24 free sites for use after correlation by the SA.

Lines and symbols were manually transferred from the photos to 1:20 000 orthophoto base maps which were given to the SA for correlation. He examined a further 30-50 sites per full map sheet and compared his findings with the mapped information. The survey crews used free sites to resolve areas of discrepancy, at which point the SA approved the map and chose Phase II sample sites.

JOB NUMBER: NE00101

MARITIME TESTING (1985) LIMITED
CONSULTING ENGINEERING & PROFESSIONAL SERVICES

Site #	Card Type	Day	Mo.	Yr.	Surveyor	Zone	Alpha Let.	100,000 Metre	Easting	Northing	P.M. 1	P.M. 2	Rock	Stone
	1					20	T							
Column											1-15	1-15	X-5	X-5

Bedrock Type (Column 34)	Slope	Constricting Layer: Depth to	Type	Drainage	Soil Transmiss.		Soil Unit Code	Variant	Map Unit Delineation Code: Soil Unit	Variant %	Soil Unit	Variant
1-14	Percent	(cm)	1-8	1-6	Sublayer	Loose Layer						

P.M.1 & P.M. 2
1 Fluvial Flooded
2 Colluvial
3 Eolian
4 Fluvial Not Flooded
5 Fluviolacustrine
6 Fluviomarine
7 Glaciofluvial
8 Glaciolacustrine
9 Glaciomarine
10 Lacustrine
11 Lacustro-till
12 Marine
13 Morainal (till)
14 Organic
15 Residual

Rockiness	Surface Coverage %
X. Nonrocky	< 2
1. Slightly rocky	2-10
2. Moderately rocky	10-25
3. Very rocky	25-50
4. Exceedingly rocky	50-90
5. Excessively rocky	> 90

Stones	Surface Coverage %
X. Nonstony	< 0.01
1. Slightly stony	0.01-0.1
2. Moderately stony	0.1-3
3. Very stony	3-15
4. Exceedingly stony	15-50
5. Excessively stony	> 50

Type of Constricting Layer
1 Fragipan
2 Ortstein
3 Placic
4 Duric
5 Plowpan
6 Compacted Basal Till
7 Other or Unidentified
8 Bedrock

Soil Site Drainage Classes
1 Rapidly drained
2 Well drained
3 Moderately well drained
4 Imperfectly drained
5 Poorly drained
6 Very poorly drained

Soil Transmissibility (CM/HR)	Sublayer
1 HIGH	> 15
2 Very rapid	> 50
3 Rapid	15-50
4 MEDIUM	0.5-15
5 Mod-rapid	5-15
6 Moderate	1.5-5
7 Mod-slow	0.5-1.5
8 LOW	< 0.5
9 Slow	0.15-0.5
10 Very slow	0.05-.15
11. Ext. Slow	< 0.05

Soil Transmissibility of Looser Layer (CM/HR)
H-High More than 15
M-Medium 5-15
L-Low Less than 0.5

Consistence (moist)
1 Very firm
2 Firm
3 Friable
4 Very Friable
5 Loose

Cementation
DEGREE
W-Weakly cemented
S-Strongly cemented
I-Indurated

EXTENT
C-Continuous
D-Discontinuous

Text Modifier
G Gravelly
VG Very Gravelly
M Mucky

Bedrock Type
1 Igneous
2 Granite
3 Basalt
4 Metamorphic
5 Slate
6 Quartzite
7 Schist
8 Sedimentary
9 Shale
10 Siltstone
11 Sandstone
12 Conglomerate
13 Limestone
14 Gypsum

Card Type Column 6	Lith Dis.	Master Layer Horizon	Suffixes	Modifier	Modal Depths: Upper Limit	Modal Depths: Lower Limit	Consistence (moist)	Texture: Modifier	Texture: Class	Coarse Fragments (% by vol.)	Cement: Degree	Cement: Extent	Sampled
2													
3													
4													
5													
6													
7													

Special Notes: Free Format

8	
9	
0	

Fig. 7. Field data sheet

Sampling and laboratory methods

The survey crews sampled 5% of their observation sites, collecting about 2 kg of soil from each of three major horizons. These were called Phase I samples. The SA chose six Phase II or benchmark sites per full mapsheet (100 sites in total) for more detailed description and analysis.

Maritime Testing laboratory staff analyzed Phase I samples for pH and particle size. Phase II samples were analyzed for pH, particle size, organic matter content, cation exchange capacity, bulk density, hydraulic conductivity, and water retention. Procedures followed McKeague (1978) for all tests except particle size where the sand was determined by sieving and the clay by hydrometer. Table 3 shows the type of analysis, number of samples, and the laboratory method used.

To ensure that particle size results were reliable, a set of standard samples was run with every batch of field samples. Results of these standards were compared with known values and the sample batch rerun if significant differences were found.

To ensure reproducibility, a checking system was developed. Batches of approximately 100-150 samples together with the results were submitted to the SA who resubmitted 10 randomly selected samples. The entire batch was accepted if the re-analysis showed that:

90% of the total sand fraction values were reproduced to within 4 percentage points of the original, and

90% of the total clay fraction values were reproduced to within 3 percentage points of the original.

Otherwise the batch was rerun.

Cartographic methods

Maritime testing staff used the Collins and Moon Geographical Information System to digitize maps that had been approved by the SA. After internal verification, the maps were submitted to the Land Resource Research Centre (LRRC) in Ottawa where minor errors were corrected. Maps requiring major changes were returned to Maritime Testing for correction.

Table 3. Analytical methods

Number of Samples	Analysis	Method[1]
983	pH	$CaCL_2$
983	pH	Water
193 (A&B horizons)	organic matter	modified Walkley-Black
116	CEC (Ca, Mg, K, Al)	NaCL extraction
989	particle size	Hydrometer[2]
795	bulk density	Core
795	hydraulic conductivity	Core
318[3]	water holding capacity	Tension table, pressure plate

[1]methods described in McKeague (1978).
[2]modified McKeague (1978) as previously described.
[3]four points on the desorption curve were done for each sample (5, 10, 33, and 1500 Kilopascals).

Data analysis and storage

Maritime Testing staff supplied all data on floppy diskette and on paper. Detailed descriptions of individual sites are kept on open file at LRRC, Truro and a summary of this information is found in this report. Summary data are grouped on the three major soil horizons:

A includes Ap, Ah, Ae
B includes all B horizons except compact BC
C includes all C horizons and compact BC.

The range of soil characteristics is determined by the upper and lower limits of soil in question. Blank fields occur in the summary data because minor soils were not sampled.

Soil naming conventions

Soils were coded as three letter symbols followed by two digit modifiers (Fig. 8). The soil name symbol carries information on soil drainage, the particle size and the mode of deposition of the lower soil material. The modifier describes depth and particle size of the upper soil material (Table 4). Modifiers are not used for land types, alluvial soils, or marine soils.

Fig. 8. Sample soil symbol.

```
                             upper soil
      soil name code         particle size class code
                    \       /
                     PGW52
                         |
                        upper soil
                        depth class code
```

Table 4. Upper soil codes

Code	Particle size classes	Code	Depth (cm)
0	Fine loamy	2	20-50
1	Fine loamy-gravelly	5	50-80
2	Coarse loamy	8	>80
3	Coarse loamy-gravelly	X	cemented layer present
4	Fine sandy		
5	Sandy		
6	Sandy-gravelly		
7	Loamy-skeletal		
8	Sandy-skeletal		
9	Fragmental		
P	Peat		

Map unit naming conventions

The numerator of the map unit symbol contains soil information and the denominator shows landscape information (Fig. 9).

Fig. 9. Sample map unit symbol.

```
                   separator
        first soil     |      second soil
                  \    |     /
                   PGW52>DRT22
                   -----------
                       1C2
                      / | \
           rockiness    |   stoniness
                      slope
```

A maximum of two soils are coded in the numerator. A single soil code is used for simple map units where one soil occupies over 80% of the area. In compound map units, where two soil symbols are used, the separator '=' shows that each soil occupies about 50% of the area; the separator '>' shows that the first soil occupies about 70% of the area and the second soil about 30%. Soil symbols are listed in alphabetical order if the separator is '='.

Tables 5, 6 and 7 show the class limits for the landscape attributes: stoniness, slope and rockiness respectively. Landscape attributes are not included for land types (recognizable because their code begins with 'Z').

Stoniness classes (Table 5) are defined in terms of the amount of surface stones greater than 25 cm in diameter (or greater than 38 cm if flat), and their spacing. Stoniness classes 0 and 1 (nonstony and slightly stony) are coded blank on the soil map.

The slope class (Table 6) of a map unit refers to the slope range which best describes the general steepness of slope.

Rockiness refers to bedrock outcrops. Classes (Table 7) are defined in terms of the amount of surface covered by bedrock and the distance between bedrock exposures. Rockiness class 0 (nonrocky) appears as a blank on the soil maps.

Table 5. Stoniness classes

Class code	Class name	Surface covered (%)	Distance between stones (m)
0	Nonstony	<.01	>25
1	Slightly stony	0.01-0.1	8-25
2	Moderately stony	0.1-3	1-8
3	Very stony	3-15	0.5-1
4	Exceedingly stony	15-50	0.1-0.5
5	Excessively stony	>50	<0.1

Table 6. Slope classes

Code	Slope (%)	Description
B	0 - 2	Level to nearly level
C	2 - 5	Very gentle slopes
D	5 - 9	Gentle slopes
E	9 - 15	Moderate slopes
F	15 - 30	Strong slopes
G	30 - 45	Very strong slopes

Table 7. Rockiness classes

Class code	Class name	Surface covered (%)	Distance between outcrops (m)
0	Nonrocky	<2	>100
1	Slightly rocky	2-10	35-100
2	Moderately rocky	10-25	10-35
3	Very rocky	25-50	3.5-10
4	Exceedingly rocky	50-90	<3.5
5	Excessively rocky	>90	

Soil correlation and key

The soils in this project have been correlated with previous soil survey reports of the area (Table 8). To find more information on Debert soils, for example, refer to the Debert name in the Cumberland report but to the Pugwash name in the Colchester and Pictou reports.

Table 8. Correlation of soil names with county soil surveys

This survey	Colchester[1]	Colchester[2] and Pictou[3]	Cumberland[4]
Bridgeville	Cumberland	Cumberland	Bridgeville
Castley	Peat	Castley	Organic
Chaswood	Cumberland	Cumberland	Chaswood
Cumberland	Cumberland	Cumberland	Cumberland
Debert	Pugwash	Pugwash	Debert
Economy	------	Hansford	Economy
Factorydale	------	Shulie	Shulie
Falmouth	Queens Nappan	Queens	Queens
Hansford	------	Hansford	Hansford
Hebert	Hebert	Hebert	Hebert
Kingsville	Queens Nappan	Queens	Kingsville
Masstown	Pugwash	Pugwash	Masstown
Pugwash	Pugwash	Pugwash	Pugwash Tormentine
Queens	Queens Nappan	Queens	Queens
Springhill	Hansford	Hansford	Springhill
Stewiacke	Stewiacke	Stewiacke	Chaswood

[1]Wicklund et al. 1948.
[2]Webb et al. (in preparation).
[3]Webb (in preparation).
[4]Nowland and McDougall 1973.

Some soil names are different because of differing naming conventions. In this report, and in the Cumberland report, there is a new name whenever there is a change in parent material particle size, in mode of deposition or in drainage. In the Colchester and Pictou reports, there is no new name for a change in drainage. Instead, drainage is shown by crosshatching on the map (Wicklund 1948), or by numeric modifiers of the soil symbol (Webb in preparation).

Other names are different because the method of grouping soils is different. For example, Hansford soils in this report have 20-35% gravel of any kind in their lower soil material. In previous reports, the gravel had to be of a certain type or a new name was required.

The soils in this project were keyed according to mode of deposition, family particle size of the lower soil material and drainage (Table 9). Some soils have been assigned names according to established naming conventions but do not occur as mappable units. These soils are inclusions in the map units of closely associated soils. For example, PGW50 soils occur, but not as mappable units, so they have been included in the PGW52 map unit.

Table 9. Soil key

Soils Developed on Glacial Till Deposits		
Fine loamy lower soil material		
Moderately well drained	Falmouth	FUH
Imperfectly drained	Queens	QUE
Poorly drained	Kingsville	KSV
Fine loamy-gravelly lower soil material		
Moderately well drained	Woodbourne	WOB
Imperfectly drained	Hantsport	HTP
Poorly drained	Mahone	MHO
Coarse loamy lower soil material		
Well to moderately well drained	Pugwash	PGW
Imperfectly drained	Debert	DRT
Poorly drained	Masstown	MSW
Coarse loamy-gravelly lower soil material		
Well to moderately well drained	Hansford	HFD
Imperfectly drained	Springhill	SGL
Poorly drained	Economy	ECY
Loamy-skeletal lower soil material		
Well drained	Morristown	MRW
Imperfectly drained	Factorydale	FAC
Poorly drained	Newtonville	NTV

(continued)

Table 9. Soil key (continued)

Soil veneer over bedrock

Well drained	South Alton	SHN
Imperfectly drained	Vernon Mines	VRN
Poorly drained	Canaan	CAA

Soils Developed on Lacustrine Deposits

Fine loamy lower soil material

Moderately well drained	Avonport	AVP
Imperfectly drained	Fash	FSH
Poorly drained	Lawrencetown	LWR

Soils Developed on Glaciofluvial Deposits

Fine sandy lower soil material

Well drained	Truro	TUO
Imperfectly drained	Onslow	OSW
Poorly drained	Glenholme	GNH

Sandy lower soil material

Rapidly drained	Cornwallis	CNW
Imperfectly drained	Kingsport	KGP
Poorly drained	Millar	MLL

Sandy-skeletal lower soil material

Rapidly drained	Hebert	HBT
Imperfectly drained	Comeau	CMU
Poorly drained	Meteghan	MGA

Soils Developed on Alluvial Deposits

Fine loamy soil material

Imperfectly drained	Cherryfield	CYF
Poorly drained	Stewiacke	STW

Coarse loamy to sandy-gravelly soil material

Well drained	Cumberland	CBR
Imperfectly drained	Bridgeville	BGE
Poorly drained	Chaswood	CHW

(continued)

Table 9. Soil key (continued)

Soils Developed on Organic Deposits (very poorly drained)

Bog	Castley	CSY
Forested swamp	Dufferin	DFN
Fen	Rossignol	RGO

Soils Developed on Dyked Marine Sediments

Coarse loamy soil material	Grand Pre	GPR
Fine loamy soil material	Acadia	ACA
Fine loamy control section stratified with peat	Chegoggin	CGN

Miscellaneous Land Types

Coastal beach	ZCB
Escarpment	ZES
Gravel pit	ZGP
Gully	ZGY
Not surveyed	ZNS
Salt marsh	ZSM
Urban land	ZUL
Water	ZZZ

PART 3. SOIL AND MAP UNIT DESCRIPTIONS

The description of soils and map units that follow provide more detail than the map legend. The map legend contains the modal soil concepts but this section contains a description of the soils as they were found in the field.

BRIDGEVILLE SOILS (BGE)

Soil material and landform

Mode of origin	: Alluvial
Soil material	: Coarse loamy to sandy-gravelly
Slope (ranges; mean)	: 0.5-1.0%; 1.0%
Drainage	: Imperfect
Stoniness	: Nonstony
Rockiness	: Nonstony
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	23-70	33	9
Particle size				
sand %	:	-----	63	1
dominant sand size		Fine		
silt %	:	-----	26	1
clay %	:	-----	11	1
pH water	:	-----	5.3	1
pH $CaCl_2$	:	-----	5.2	1
Consistence	:	Friable - very friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	62-70	66	2
dominant sand size		Fine		
silt %	:	22-27	25	2
clay %	:	8-11	9	2
pH water	:	4.9-5.3	5.1	2
pH $CaCl_2$	:	3.6-4.8	4.4	2
Consistence	:	Friable		

Compound map units

BGE =CHW

Chaswood (CHW) soils are usually located in low lying and depressional areas of the map unit.

Comments

Bridgeville map units are located on the Welsford, Hodson, Poplar Hill, Three Brooks, Louisville, and Balfron map sheets (Fig. 1). Bridgeville map units commonly include CHW, CBR, STW, and CSY soils and unnamed soils that are sandy or gravelly below 50 cm.

CASTLEY SOILS (CSY)

Soil material and landform

Castley soils are very poorly drained soils developed on organic material. They are located on flat or domed bogs and consist of mesic to fibric sphagnum peat often overlying sedge peat deposits. Castley units lack tree cover, and are extremely acid and nutrient poor.

Compound map units

Castley soils have not been mapped with any other soils.

Comments

Castley soils occur on all map sheets (Fig. 1). Dufferin and Rossignol, two minor organic soils, have been included in the Castley map unit. Dufferin soils are tree-covered swamps; Rossignol soils are fens.

CHASWOOD SOILS (CHW)

Soil material and landform

Mode of origin	: Alluvial
Soil material	: Coarse loamy to sandy-gravelly
Slope (ranges; mean)	: 0.5-2.0%; 2.0%
Drainage	: Poor
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	11-70	23	44
Consistence	:	Friable to very friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	-----	74	1
dominant sand size		Fine		
silt %	:	-----	17	1
clay %	:	-----	9	1
pH water	:	-----	5.5	1
pH $CaCl_2$	:	-----	4.6	1
Consistence	:	Friable to loose		

Compound map units

BGE = CHW (see BGE description)

Comments

Chaswood soils have been mapped on all map sheets except Pugwash River (Fig. 1). Chaswood map units usually occur as drainage channels between soils having a family particle size of coarse loamy. Many Chaswood units also include the steep sides of drainage channels, gullies and ravines. Chaswood soils show very little profile development and are usually stratified and well sorted. Chaswood map units have inclusions of organic and fine loamy soils.

CUMBERLAND SOILS (CBR)

Soil material and landform

Mode of origin	: Alluvial
Soil material	: Coarse loamy
Slope (ranges; mean)	: 0.5-1.0%; 1.0%
Drainage	: Moderately well
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	21-56	27	15
Particle size				
sand %	:	51-56	54	2
dominant sand size		Fine		
silt %	:	33-34	34	2
clay %	:	10-16	13	2
Hydraulic conductivity (cm/h)	:	0.0-2.9	1.5	10
Bulk density (g/cm^3)	:	1.3-1.5	1.4	10
Organic carbon (%)	:	1.4-1.6	1.5	2
pH water	:	6.2-6.7	6.5	2
pH $CaCl_2$	:	4.9-6.5	5.7	2
Consistence	:	Friable to very friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	40-68	55	4
dominant sand size		Fine		
silt %	:	26-46	35	4
clay %	:	6-14	10	4
Hydraulic conductivity (cm/h)	:	0.0-1.8	0.8	15
Bulk density (g/cm^3)	:	1.2-1.5	1.4	15
Organic carbon (%)	:	0.6-0.7	0.7	2
pH water	:	5.8-7.2	6.3	4
pH $CaCl_2$	:	4.5-6.6	5.2	4
Consistence	:	Friable		

Compound map units

Cumberland soils were mapped as pure units, however, inclusions of Bridgeville and Chaswood soils occur.

Comments

Cumberland soils are located along river and stream beds but do not flood as frequently as Bridgeville and Chaswood soils. Cumberland soils are located on the Welsford, Meadowville, Three Brooks, Balfron, and Middleboro map sheets (Fig. 1). Cumberland map units may have inclusions of fine loamy alluvial material.

DEBERT 22 SOILS (DRT22)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 1.0-4.5%; 3.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to moderately stony; dominantly nonstony
Rockiness (ranges)	: Nonrocky
Depth to constricting layer (range; mean)	: 25-49 cm; 45 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-49	21	573
Particle size				
sand %	:	28-66	49	26
dominant sand size		Fine		
silt %	:	28-63	41	26
clay %	:	5-18	10	26
Hydraulic conductivity (cm/h)	:	0.0-3.5	0.4	40
Bulk density (g/cm^3)	:	0.8-1.7	1.3	40
Organic carbon (%)	:	0.3-4.4	2.2	11
pH water	:	3.4-7.1	5.2	26
pH $CaCl_2$	:	2.8-6.3	4.4	26
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	7-54	24	573
Particle size				
sand %	:	35-70	53	26
dominant sand size			Fine	
silt %	:	24-53	37	26
clay %	:	3-17	10	26
Hydraulic conductivity (cm/h)	:	0.0-3.2	0.4	25
Bulk density (g/cm^3)	:	0.3-1.7	0.8	11
Organic carbon (%)	:	0.3-2.8	0.9	13
pH water	:	4.2-7.1	5.4	26
pH $CaCl_2$	:	3.6-6.3	4.5	26
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	27-63	49	28
dominant sand size			Fine	
silt %	:	29-64	39	28
clay %	:	6-17	12	28
Hydraulic conductivity (cm/h)	:	0.0-3.5	0.1	40
Bulk density (g/cm^3)	:	1.6-2.0	1.9	40
pH water	:	4.8-7.5	5.9	28
pH $CaCl_2$	:	3.8-6.6	4.9	28
Consistence	:	Firm		

Compound map units

DRT22=DRT52	DRT22=QUE22	MSW22>DRT22
DRT22=HFD22	DRT22>MSW22	PGW22>DRT22
DRT22=MSW22	DRT22>PGW22	PGW52>DRT22
DRT22=PGW22	DRT22>PGW52	
DRT22=PGW52	DRT22>SGL22	

Pugwash (PGW) soils are usually found on the upper slopes and crests.

Debert 52 (DRT52) are found on the upper slopes of the map unit.

Masstown (MSW) soils are found in depressional areas and in drainage channels.

Queens (QUE) soils usually occur on the upper slopes and crests of the map unit.

Hansford (HFD) and Springhill (SGL) occur frequently on the lower slopes of the map unit.

Comments

Debert 22 soils occur on all except the Hodson, Lyons Brook, and Tatamagouche map sheets and make up one of largest soil groups in the survey area. Debert map units include such minor soils as DRT20, DRT25, DRT53, and OSW25.

DEBERT 52 SOILS (DRT52)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 0.5-9.0%; 3.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 50-62 cm; 55cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	3-55	23	711
Particle size				
sand %	:	32-66	50	40
dominant sand size		Fine		
silt %	:	27-55	41	40
clay %	:	4-19	10	40
Hydraulic conductivity (cm/h)	:	0.0-8.5	1.0	55
Bulk density (g/cm^3)	:	0.8-1.6	1.2	55
Organic carbon (%)	:	0.4-4.2	2.2	12
pH water	:	4.0-7.1	5.2	40
pH $CaCl_2$	:	3.6-6.4	4.6	40
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	11-90	32	711
Particle size				
sand %	:	23-77	52	42
dominant sand size		Fine		
silt %	:	16-58	37	42
clay %	:	4-20	10	42
Hydraulic conductivity (cm/h)	:	0.0-2.1	0.2	55
Bulk density (g/cm^3)	:	1.3-1.9	1.6	55
Organic carbon (%)	:	0.2-1.7	0.6	12
pH water	:	3.8-7.3	5.5	42
pH $CaCl_2$	:	3.4-6.6	4.7	42
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	23-73	50	68
dominant sand size			Fine	
silt %	:	23-60	38	68
clay %	:	4-18	12	68
Hydraulic conductivity (cm/h)	:	0.0-1.0	0.1	50
Bulk density (g/cm^3)	:	1.4-2.1	1.8	50
pH water	:	4.2-7.6	5.9	68
pH $CaCl_2$	:	3.8-6.7	5.0	68
Consistence	:	Firm		

Compound map units

DRT52=HFD52	DRT52>MSW22	DRT22=DRT52
DRT52=MSW22	DRT52>MSW52	PGW22>DRT52
DRT52=PGW52	DRT52>PGW52	PGW52>DRT52
DRT52=QUE22	DRT52>QUE22	PGW82>DRT52
DRT52=QUE52	DRT52>SGL52	QUE52>DRT52

Pugwash (PGW) soils are usually found on the upper slopes and crests.

Masstown (MSW) soils are found in depressional areas and in drainage channels.

Queens (QUE) soils usually occur on the upper slopes and crests of the map unit.

Hansford (HFD) and Springhill (SGL) soils occur more frequently on the lower slopes of the map unit.

Comments

Debert 52 soils occur on all map sheets except Amherst Shore (Fig. 1) and make up one of largest soil groups on the North Shore. DRT52 map units include DRT50, DRT53, and DRT55 soils.

DEBERT 82 SOILS (DRT82)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 0.5-4.0%; 3.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to slightly stony; predominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	29-34	31	65
Particle size				
sand %	:	43-75	60	5
dominant sand size			Very fine	
silt %	:	20-41	31	5
clay %	:	5-16	9	5
Hydraulic conductivity (cm/h)	:	0.3-0.8	0.6	5
Bulk density (g/cm^3)	:	1.4-1.6	1.5	5
Organic carbon (%)	:	0.6-2.1	1.4	2
pH water	:	4.6-6.8	5.1	5
pH $CaCl_2$	:	3.6-6.2	4.4	5
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	22-28	25	65
Particle size				
sand %	:	38-77	57	5
dominant sand size			Fine	
silt %	:	21-45	35	5
clay %	:	2-17	8	5
Hydraulic conductivity (cm/h)	:	0.1-0.2	0.1	5
Bulk density (g/cm^3)	:	1.6-1.9	1.8	5
Organic carbon (%)	:	0.7-2.2	1.4	2
pH water	:	4.5-6.3	5.4	5
pH $CaCl_2$	:	3.7-5.6	4.7	5
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	37-71	57	13
dominant sand size		Fine		
silt %	:	22-46	32	13
clay %	:	5-17	11	13
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.1	5
Bulk density (g/cm^3)	:	1.8-1.9	1.9	5
pH water	:	4.3-6.7	5.6	13
pH $CaCl_2$	:	4.0-6.3	4.7	13
Consistence	:	Friable		

Compound map units

Debert 82 soils have only been mapped as pure units, however DRT22 and DRT52 can be found in Debert 82 map units.

Comments

Debert 82 soils are not common but are found on the Welsford, Brule, Balfron, Tatamagouche, Middleboro, Pugwash, and West Linden map sheets (Fig. 1). Soils with sandy lower soil material (OSW84) have been included with the Debert map units near river channels and coastal beaches.

ECONOMY 22 SOILS (ECY22)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 0.5-3.0%; 2.5%
Drainage	: Poor
Stoniness (ranges)	: Nonstony to slightly stony; dominantly slightly stony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 20-49 cm; 45 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	13-31	21	20
Particle size				
sand %	:	26-61	43	2
dominant sand size		Fine		
silt %	:	37-52	45	2
clay %	:	2-22	12	2
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.1	5
Bulk density (g/cm^3)	:	0.7-0.8	0.8	5
Organic carbon (%)	:	-----	4.5	1
pH water	:	4.2-5.0	4.6	2
pH $CaCl_2$	:	3.0-4.2	3.6	2
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	13-35	24	20
Particle size				
sand %	:	51-58	55	2
dominant sand size		Very fine		
silt %	:	34-35	35	2
clay %	:	7-14	11	2
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	5
Bulk density (g/cm^3)	:	1.2-1.6	1.4	5
Organic carbon (%)	:	-----	1.3	1
pH water	:	4.9-5.3	5.1	2
pH $CaCl_2$	:	3.6-4.2	3.9	2
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	44-67	56	2
dominant sand size		Fine		
silt %	:	27-38	33	2
clay %	:	6-18	12	2
pH water	:	5.5-5.9	5.7	2
pH $CaCl_2$	:	4.3-4.7	4.5	2
Consistence	:	Firm		

Compound map units

ECY22=SGL22 ECY22>SGL22
ECY22=SGL52

Springhill (SGL) soils are located at higher elevations where surface drainage conditions are slightly better.

Comments

Economy 22 soils have been mapped in the eastern end of the survey area on the Meadowville, Louisville, Tatamagouche, and West Tatamagouche map sheets (Fig. 1). Economy map units may have organic, coarse loamy and sandy soil inclusions. Economy map units are frequently associated with organic map units.

ECONOMY 53 SOILS (ECY53)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 0.5-3.0%; 3.0%
Drainage	: Poor
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 52-65 cm; 55 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-45	21	27
Particle size				
sand %	:	54-63	59	2
dominant sand size		Fine		
silt %	:	31-34	32	2
clay %	:	6-12	9	2
Organic carbon (%)	:	-----	3.0	1
pH water	:	4.7-5.7	5.2	2
pH $CaCl_2$	:	3.8-5.0	4.4	2
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	25-57	34	27
Particle size				
sand %	:	55-57	56	2
dominant sand size		Fine		
silt %	:	30-34	32	2
clay %	:	12-13	12	2
Organic carbon (%)	:	-----	0.6	1
pH water	:	6.2-6.2	6.2	2
pH $CaCl_2$	:	5.3-5.4	5.4	2
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	48-60	54	2
dominant sand size		Fine		
silt %	:	31-42	37	2
clay %	:	9-10	9	2
pH water	:	6.2-6.8	6.5	2
pH $CaCl_2$	:	5.6-6.5	6.1	2
Consistence	:	Firm		

Compound map units

SGL53>ECY53 (see SGL53 description).

Comments

Economy 53 soils have been mapped in the eastern end of the survey area on the Welsford, Poplar Hill, Meadowville, Lyons Brook, Louisville, Brule, Balfron, and West Tatamagouche map sheets (Fig. 1). Economy map units may have organic, coarse loamy and sandy soil inclusions. Economy 53 is the most commonly mapped Economy soil.

FACTORYDALE 87 SOILS (FAC87)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Loamy-skeletal
Slope (ranges; mean)	: 2.0-4.0%; 3.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon	Range	Mean	Number
Thickness (cm)	: 20-36	27	7
Particle size			
sand %	: 47-71	59	2
dominant sand size		Fine	
silt %	: 25-35	30	2
clay %	: 4-18	11	2
Organic carbon (%)	: -----	1.1	1
pH water	: 4.2-4.9	4.5	2
pH $CaCl_2$	: 3.3-4.2	3.7	2
Consistence	: Friable		

B horizon	Range	Mean	Number
Thickness (cm)	: 22-52	34	7
Particle size			
sand %	: 52-56	54	3
dominant sand size		Very fine	
silt %	: 34-36	34	3
clay %	: 9-14	12	3
Organic carbon (%)	: -----	0.4	1
pH water	: 4.8-5.3	5.1	3
pH $CaCl_2$	: 4.2-5.0	4.6	3
Consistence	: Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	57-76	69	4
dominant sand size		Very coarse		
silt %	:	15-29	22	4
clay %	:	4-14	9	4
pH water	:	4.5-6.0	5.4	4
pH $CaCl_2$	:	4.0-5.0	4.5	4
Consistence	:	Friable		

Compound map units

Factorydale soils have not been mapped with other soils.

Comments

Factorydale 87 soils were found on the Hodson, Tatamagouche and Brule map sheets (Fig. 1). Morristown and Newtonville soils have been included in the Factorydale map units.

FALMOUTH 22 SOILS (FUH22)

Lower soil material and landform

Mode of origin	:	Glacial till
Lower soil material	:	Fine loamy
Slope (ranges; mean)	:	2.5-6.0%; 3.5%
Drainage	:	Moderately well drained
Stoniness (ranges)	:	Nonstony to slightly stony; dominantly nonstony
Rockiness	:	Nonrocky
Depth to constricting layer (range; mean)	:	20-45 cm; 46 cm
Kind of constricting layer	:	Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	14-36	22	92
Particle size				
sand %	:	38-79	55	5
dominant sand size		Fine		
silt %	:	17-45	32	5
clay %	:	4-17	13	5
Organic carbon (%)	:	1.3-1.4	1.4	2
Hydraulic conductivity (cm/h)	:	0.0-0.8	0.3	10
Bulk density (g/cm^3)	:	1.4-1.7	1.5	10
pH water	:	4.6-6.6	6.0	5
pH $CaCl_2$	:	3.6-5.7	5.2	5
Consistence	:	Friable		

B horizon		Range	Mean	Number

Consistence	:	Friable		
Thickness (cm)	:	6-34	24	92
Particle size				
sand %	:	46-63	54	4
dominant sand size		Fine		
silt %	:	30-38	38	4
clay %	:	8-24	14	4
Organic carbon (%)	:	------	.7	1
Hydraulic conductivity (cm/h)	:	0.2-0.6	0.3	5
Bulk density (g/cm^3)	:	1.7-1.7	1.7	5
pH water	:	4.9-6.5	5.9	4
pH $CaCl_2$	:	3.9-5.6	4.9	4

<u>C horizon</u>		Range	Mean	Number
Particle size				
sand %	:	8-45	31	18
dominant sand size		Very fine		
silt %	:	30-62	45	18
clay %	:	18-32	25	18
Hydraulic conductivity (cm/h)	:	0.0-0.6	0.1	10
Bulk density (g/cm^3)	:	1.8-2.0	1.9	10
pH water	:	4.6-7.0	5.7	18
pH $CaCl_2$	:	3.7-6.3	4.7	18
Consistence	:	Firm		

Compound map units

FUH22=QUE22 FUH22>HFD53 PGW52>FUH22

Queens (QUE) soils are found on the lower slopes and seepage areas.

Hansford (HFD) are found in lower slope positions.

Comments

Falmouth 22 soils occur on all map sheets east of and including West Tatamagouche, except the Louisville map sheet (Fig. 1). Falmouth soils with a fine loamy surface occur as inclusions (FUH20). The lower soil material of Falmouth soils often borders on coarse loamy. Woodbourne soils (WOB20, WOB22, and WOB23) have been included in Falmouth map units.

FALMOUTH 52 SOILS (FUH52)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Fine loamy
Slope (ranges; mean)	: 2.5-6.5%; 4.0%
Drainage	: Moderately well drained
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 51-72 cm; 60 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	12-38	22	60
Particle size				
sand %	:	26-58	48	8
dominant sand size		Fine		
silt %	:	29-60	40	8
clay %	:	8-17	12	8
Hydraulic conductivity (cm/h)	:	11.2-24.9	18.3	5
Bulk density (g/cm^3)	:	0.9-1.0	1.0	5
Organic carbon (%)	:	1.8-3.5	2.7	2
pH water	:	5.0-7.0	6.0	7
pH $CaCl_2$	:	3.9-6.6	5.2	7
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	20-66	38	60
Particle size				
sand %	:	26-73	49	8
dominant sand size		Fine		
silt %	:	21-60	38	8
clay %	:	6-22	13	8
Hydraulic conductivity (cm/h)	:	0.1-0.5	0.3	5
Bulk density (g/cm^3)	:	1.6-1.7	1.6	5
Organic carbon (%)	:	0.5-0.6	0.6	2
pH water	:	5.5-7.7	6.1	8
pH $CaCl_2$	:	4.5-7.0	5.2	8
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	14-46	33	22
dominant sand size		Very fine		
silt %	:	35-64	44	22
clay %	:	18-28	23	22
Hydraulic conductivity (cm/h)	:	0.0-1.5	0.5	5
Bulk density (g/cm^3)	:	1.9-2.0	1.9	5
pH water	:	5.1-8.5	6.2	22
pH $CaCl_2$	:	4.0-7.4	5.1	22
Consistence	:	Firm		

Compound map units

FUH52=QUE22 FUH52>QUE52

Queens (QUE) soils are found on the lower slopes and seepage areas.

Comments

Falmouth 52 soils occur on the Welsford, Hodson, Poplar Hill, Louisville, Brule, Tatamagouche, and West Tatamagouche map sheets (Fig. 1). Falmouth soils with a fine loamy surface occur (FUH50). The lower soil material of Falmouth soils often borders on coarse loamy. Woodbourne soils (WOB50, WOB52, and WOB53) have been included in Falmouth map units.

HANSFORD 22 SOILS (HFD22)

Lower soil material and landform

Mode of origin	:	Glacial till
Lower soil material	:	Coarse loamy-gravelly
Slope (ranges; mean)	:	2.0-8.5%; 4.0%
Drainage	:	Moderately well drained
Stoniness (ranges)	:	Nonstony to moderately stony; dominantly nonstony
Rockiness	:	Nonrocky
Depth to constricting layer (range; mean)	:	27-49 cm; 45 cm
Kind of constricting layer	:	Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	8-31	21	63
Particle size				
sand %	:	41-65	55	9
dominant sand size		Very fine		
silt %	:	25-47	35	9
clay %	:	7-14	10	9
Hydraulic conductivity (cm/h)	:	0.5-1.7	1.0	5
Bulk density (g/cm^3)	:	1.2-1.3	1.2	5
Organic carbon (%)	:	1.8-2.4	2.1	2
pH water	:	4.3-6.2	5.2	9
pH $CaCl_2$	:	4.0-5.4	4.5	9
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	9-38	24	63
Particle size				
sand %	:	35-67	53	10
dominant sand size		Fine		
silt %	:	25-45	37	10
clay %	:	6-20	10	10
Hydraulic conductivity (cm/h)	:	0.1-0.9	0.4	5
Bulk density (g/cm^3)	:	1.5-1.8	1.6	5
Organic carbon (%)	:	-----	0.7	1
pH water	:	4.8-7.0	5.4	10
pH $CaCl_2$	:	4.1-6.0	4.7	10
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	51-68	60	13
dominant sand size			Fine	
silt %	:	26-38	31	13
clay %	:	6-14	9	13
pH water	:	4.8-6.4	5.3	13
pH $CaCl_2$	:	4.1-5.6	4.4	13
Consistence	:	Firm		

Compound map units

HFD22=SGL22 HFD22>SGL53 DRT22=HFD22

Springhill (SGL) soils are found in the low lying and depressional areas.

Comments

Hansford 22 soils are located on all map sheets east of South Wallace Bay, except for Hodson and Three Brooks (Fig. 1). The Hansford map units have inclusions of coarse loamy and, in a few instances, sandy-gravelly surface material (PGW23 and HFD23).

HANSFORD 52 SOILS (HFD52)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 2.0-7.0%; 4.5%
Drainage	: Well drained
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 50-64 cm; 54 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	14-38	22	45
Particle size				
sand %	:	44-68	56	6
dominant sand size			Fine	
silt %	:	25-48	35	6
clay %	:	7-13	9	6
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.1	5
Bulk density (g/cm^3)	:	1.3-1.5	1.4	5
Organic carbon (%)	:	0.5-2.2	1.3	3
pH water	:	4.9-6.0	5.3	6
pH $CaCl_2$	:	4.1-5.0	4.5	6
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	20-56	32	45
Particle size				
sand %	:	49-75	59	6
dominant sand size			Fine	
silt %	:	20-40	32	6
clay %	:	6-13	9	6
Hydraulic conductivity (cm/h)	:	0.0-0.2	0.1	5
Bulk Density (g/cm^3)	:	1.8-1.8	1.8	5
Organic carbon (%)	:	0.3-1.1	0.8	3
pH water	:	5.1-6.5	5.6	6
pH $CaCl_2$	:	4.2-5.8	4.9	6
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	40-75	61	14
dominant sand size			Fine	
silt %	:	17-48	31	14
clay %	:	3-14	8	14
pH water	:	4.6-7.2	5.6	14
pH $CaCl_2$	:	4.1-6.2	4.7	14
Consistence	:	Firm		

Compound map units

HFD52=SGL52 DRT52=HFD52

Springhill (SGL) soils are found in the low lying and depressional areas of the map unit.

Comments

Hansford 52 soils are located in the eastern end of the survey area on the Welsford, Hodson, Lyons Brook, Three Brooks, Louisville, Brule, Balfron, Tatamagouche, and West Tatamagouche map sheets (Fig. 1). The Hansford map units may have inclusions of coarse loamy soils and, in a few instances, sandy-gravelly surface material.

HANSFORD 53 SOILS (HFD53)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 2.0-8.0%; 4.0%
Drainage	: Well drained
Stoniness (ranges)	: Nonstony to moderately stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 50-78 cm; 56 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	7-40	23	288
Particle size				
sand %	:	35-68	57	15
dominant sand size			Fine	
silt %	:	24-50	33	15
clay %	:	3-20	10	15
Organic carbon (%)	:	0.5-3.5	2.3	6
pH water	:	4.1-7.0	5.3	15
pH $CaCl_2$	:	3.2-6.7	4.6	15
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	9-56	33	288
Particle size				
sand %	:	42-80	60	15
dominant sand size			Fine	
silt %	:	14-47	32	15
clay %	:	5-13	9	15
Organic carbon (%)	:	0.3-1.1	0.8	5
pH water	:	4.7-6.8	5.5	15
pH $CaCl_2$	:	3.8-5.7	4.7	15
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	43-71	55	22
dominant sand size			Fine	
silt %	:	20-43	34	22
clay %	:	4-18	11	22
pH water	:	4.8-6.8	5.6	22
pH $CaCl_2$	:	4.0-5.8	4.6	22
Consistence	:	Firm		

Compound map units

HFD53=PGW52 HFD53=SGL53 FUH22>HFD53
HFD53>SGL53

Springhill (SGL) soils are usually found in the low lying and depressional areas of the map unit. Pugwash (PGW) soils are found on upper slopes.

Comments

Hansford 53 soils are located on all map sheets east of South Wallace Bay map sheet (Fig. 1). The Hansford map units may have inclusions of coarse loamy soils and, in a few instances, sandy-gravelly surface material.

HEBERT 52 SOILS (HBT52)

Lower soil material and landform

Mode of origin	: Glaciofluvial
Lower soil material	: Sandy-gravelly
Slope (ranges; mean)	: 2.0-3.0%; 3.0%
Drainage	: Well drained
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	24-32	28	3
Particle size				
sand %	:	58-65	62	3
dominant sand size		Fine		
silt %	:	25-38	31	3
clay %	:	4-9	7	3
Organic carbon (%)	:	-----	0.3	1
pH water	:	4.3-5.8	5.1	3
pH $CaCl_2$	:	3.5-5.0	4.3	3
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	34-44	39	3
Particle size				
sand %	:	68-76	71	3
dominant sand size		Fine		
silt %	:	20-24	22	3
clay %	:	4-9	7	3
Organic carbon (%)	:	-----	2.6	1
pH water	:	4.3-6.4	5.3	3
pH $CaCl_2$	:	4.0-5.3	4.7	1
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	76-82	79	4
dominant sand size		Fine		
silt %	:	13-19	16	4
clay %	:	5-6	5	4
pH water	:	5.2-6.1	5.5	4
pH $CaCl_2$	:	4.5-6.1	5.2	4
Consistence	:	Loose		

Compound map units

Hebert soils have been mapped as pure units.

Comments

Hebert 52 soils can be found on the Welsford and Brule map sheets (Fig. 1) and are commonly used for sand or gravel pits. Pockets of Cornwallis soils (CNW85) have been included in the Hebert map units.

KINGSVILLE 22 SOILS (KSV22)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Fine loamy
Slope (ranges; mean)	: 2.0-3.0%; 2.5%
Drainage	: Poor
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 39-49 cm; 44 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	11-43	21	35
Particle size				
sand %	:	35-74	54	4
dominant sand size			Very fine	
silt %	:	23-50	37	4
clay %	:	3-15	9	4
Hydraulic conductivity (cm/h)	:	0.0-2.1	0.8	5
Bulk density (g/cm^3)	:	0.3-0.6	0.5	5
Organic carbon (%)	:	0.9-11.9	7.8	3
pH water	:	4.4-4.7	4.6	4
pH $CaCl_2$	:	3.6-4.1	3.9	4
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	9-68	23	35
Particle size				
sand %	:	38-70	48	5
dominant sand size		Fine		
silt %	:	23-46	35	5
clay %	:	7-23	16	5
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	5
Bulk density (g/cm^3)	:	1.3-1.4	1.4	5
Organic carbon (%)	:	0.3-1.8	1.1	3
pH water	:	4.6-6.6	5.3	5
pH $CaCl_2$	:	3.8-5.4	4.3	5
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	28-47	39	5
dominant sand size		Fine		
silt %	:	34-47	39	5
clay %	:	19-25	23	5
Hydraulic conductivity (cm/h)	:	0.0-0.2	0.1	15
Bulk density (g/cm^3)	:	1.8-1.9	1.8	15
pH water	:	4.9-6.0	5.4	5
pH $CaCl_2$	:	3.8-5.3	4.5	5
Consistence	:	Firm		

Compound map units

KSV22=QUE22	KSV22>QUE22	QUE22>KSV22
		QUE52>KSV22

Queens (QUE) soils are found on upper slope positions.

Comments

Kingsville units occur on all maps east of Middleboro except Balfron (Fig. 1). The majority of Kingsville soils have a coarse loamy surface and the lower soil material which borders on coarse loamy. KSV22 map units include some KSV52 and KSV20 soils.

MASSTOWN 22 SOILS (MSW22)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 2.5-4.0%; 3.0%
Drainage	: Poor
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 38-47 cm; 44 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	12-40	20	178
Particle size				
sand %	:	32-69	47	9
dominant sand size		Very fine		
silt %	:	22-59	46	9
clay %	:	4-10	7	9
Hydraulic conductivity (cm/h)	:	0.0-1.9	0.2	15
Bulk density (g/cm^3)	:	1.2-1.4	1.4	15
Organic carbon (%)	:	1.0-4.2	2.4	5
pH water	:	4.1-6.3	5.3	9
pH $CaCl_2$	:	3.5-5.7	4.6	9
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	14-78	24	178
Particle size				
sand %	:	30-59	47	10
dominant sand size		Fine		
silt %	:	30-58	42	10
clay %	:	5-16	11	10
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	15
Bulk density (g/cm^3)	:	1.6-1.8	1.7	15
Organic carbon (%)	:	0.3-3.8	1.1	5
pH water	:	4.3-7.2	5.8	10
pH $CaCl_2$	:	3.6-6.2	4.9	10
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	30-64	50	10
dominant sand size			Fine	
silt %	:	28-57	38	10
clay %	:	7-16	12	10
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	15
Bulk density (g/cm^3)	:	1.7-2.0	1.9	15
pH water	:	5.4-7.6	6.3	10
pH $CaCl_2$	:	4.4-6.4	5.3	10
Consistence	:	Firm		

Compound map units

MSW22>DRT22	DRT22=MSW22	DRT22>MSW22
	DRT52=MSW22	DRT52>MSW22

Debert (DRT) soils are usually located on slightly elevated portions of the map unit where natural drainage is improved.

Comments

Masstown 22 soils occur on all maps west of West Tatamagouche and can also be found on Welsford, Poplar Hill, and Louisville (Fig. 1). Masstown 22 soils are one of the most commonly mapped soils of the Masstown group. Masstown map units may have inclusions of MSW53 and CSY.

MASSTOWN 52 SOILS (MSW52)

Lower soil material and landform

Mode of origin	:	Glacial till
Lower soil material	:	Coarse loamy
Slope (ranges; mean)	:	2.0-3.5%; 2.5%
Drainage	:	Poor
Stoniness	:	Nonstony
Rockiness	:	Nonrocky
Depth to constricting layer (range; mean)	:	50-62 cm; 52 cm
Kind of constricting layer	:	Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-60	23	108
Particle size				
sand %	:	21-60	34	5
dominant sand size		Very fine		
silt %	:	32-68	52	5
clay %	:	4-25	14	5
Hydraulic conductivity (cm/h)	:	0.0-0.3	0.1	10
Bulk density (g/cm^3)	:	0.9-1.2	1.1	10
Organic carbon (%)	:	0.6-4.5	2.8	4
pH water	:	4.3-5.8	5.0	5
pH $CaCl_2$	:	3.6-5.4	4.4	5
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	10-44	29	108
Particle size				
sand %	:	41-51	46	5
dominant sand size		Fine		
silt %	:	34-46	40	5
clay %	:	12-18	15	5
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	5
Bulk density (g/cm^3)	:	1.8-1.9	1.8	5
Organic carbon (%)	:	0.2-0.6	0.4	4
pH water	:	5.1-7.5	5.9	5
pH $CaCl_2$	:	4.2-6.0	4.9	5
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	33-49	43	6
dominant sand size		Fine		
silt %	:	34-51	41	6
clay %	:	12-17	16	6
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	10
Bulk density (g/cm^3)	:	1.8-1.9	1.9	10
pH water	:	5.3-8.1	6.1	6
pH $CaCl_2$	:	4.1-6.7	5.0	6
Consistence	:	Firm		

Compound map units

DRT52>MSW52

Debert soils may be found in upper slope positions. Other poorly drained soils such as MSW22 and KSV22 also occur as inclusions.

Comments

Masstown 52 soils occur throughout the survey area and have been mapped on all map sheets except the Poplar Hill, Lyons Brook, South Wallace Bay, West Pugwash, West Linden, and Amherst Shore map sheets (Fig. 1).

MASSTOWN 82 SOILS (MSW82)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 2.0-3.0%; 3.0%
Drainage	: Poor
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon	Range	Mean	Number
Thickness (cm)	: 17-33	24	13
Consistence	: Friable		

B horizon	Range	Mean	Number
Thickness (cm)	: 17-43	36	13
Consistence	: Friable		

C horizon

Consistence	: Friable

Compound map units

Masstown 82 soils have not been mapped with any other soils although Masstown 22, Masstown 52, and some Debert soils may be found in Masstown 82 map units.

Comments

Masstown 82 soils occur on all maps west of Middleboro except for the Fox Harbour, West Pugwash, Pugwash River, and Amherst Shore map sheets (Fig. 1). Millar and Glenholme soils have been included in Masstown 82 map units.

PUGWASH 22 SOILS (PGW22)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 1.5-8.0%; 3.0%
Drainage	: Moderately well drained
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 34-49 cm; 45 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-35	22	180
Particle size				
sand %	:	10-71	51	18
dominant sand size		Fine		
silt %	:	25-82	42	18
clay %	:	3-13	7	18
Hydraulic conductivity (cm/h)	:	0.0-2.9	0.6	20
Bulk density (g/cm^3)	:	1.2-1.7	1.4	20
Organic carbon (%)	:	1.3-3.2	2.1	3
pH water	:	4.2-7.2	5.3	18
$CaCl_2$	:	3.3-6.4	4.6	18
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	10-34	23	180
Particle size				
sand %	:	31-77	55	18
dominant sand size		Fine		
silt %	:	19-50	36	18
clay %	:	4-19	9	18
Hydraulic conductivity (cm/h)	:	0.0-0.2	0.1	15
Bulk density (g/cm^3)	:	1.5-1.9	1.7	15
Organic carbon (%)	:	0.1-1.2	0.8	3
pH water	:	4.6-7.0	5.6	18
pH $CaCl_2$	:	4.1-5.9	4.8	18
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	27-73	51	29
dominant sand size			Fine	
silt %	:	20-57	37	29
clay %	:	4-18	12	29
Hydraulic conductivity (cm/h)	:	0.0-0.1	0.0	15
Bulk density (g/cm^3)	:	1.8-2.0	1.9	15
pH water	:	4.6-8.0	5.6	29
pH $CaCl_2$	:	3.9-6.7	4.6	29
Consistence	:	Firm		

Compound map units

PGW22>DRT22 PGW22>DRT52 DRT22=PGW22
DRT22>PGW22

Debert (DRT) soils are found in the low lying and depressional areas of the map unit.

Comments

Pugwash 22 soils occur on the Welsford, Hodson, Poplar Hill, Louisville, Brule, Balfron, West Tatamagouche,and Middleboro map sheets and all map sheets west of North Wallace Bay (Fig. 1). In some areas, especially near river channels and coastal areas, Pugwash lower soil material may approach a sandy particle size. Surface materials having pockets of sands or gravels have been included with Pugwash map units.

PUGWASH 52 SOILS (PGW52)

Lower soil material and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy
Slope (ranges; mean)	: 1.0-9.0%; 3.5%
Drainage	: Well drained
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 51-76 cm; 55 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	8-44	23	373
Particle size				
sand %	:	45-71	57	18
dominant sand size			Fine	
silt %	:	26-48	35	18
clay %	:	2-18	8	18
Hydraulic conductivity (cm/h)	:	0.0-27.6	6.1	25
Bulk density (g/cm^3)	:	0.8-1.5	1.1	25
Organic carbon (%)	:	0.7-6.8	3.2	7
pH water	:	3.6-7.0	5.2	18
pH $CaCl_2$	:	3.0-6.1	4.6	18
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	14-76	32	373
Particle size				
sand %	:	25-71	56	19
dominant sand size			Fine	
silt %	:	24-54	35	19
clay %	:	3-21	9	19
Hydraulic conductivity (cm/h)	:	0.0-14.1	2.2	30
Bulk density (g/cm^3)	:	1.1-1.7	1.4	30
Organic carbon (%)	:	0.7-2.8	1.4	7
pH water	:	4.6-7.8	5.6	19
pH $CaCl_2$	:	3.8-7.0	4.9	19
Consistence	:	Friable		

C horizon		Range	Mean	Number
Thickness (cm)	:	34-49	45	372
Particle size				
sand %	:	34-72	55	56
dominant sand size		Fine		
silt %	:	23-50	35	56
clay %	:	3-18	11	56
Hydraulic conductivity (cm/h)	:	0.0-1.2	0.2	30
Bulk density (g/cm^3)	:	1.5-2.0	1.8	30
pH water	:	4.7-8.6	5.9	56
pH $CaCl_2$	:	3.6-7.4	4.9	56
Consistence	:	Firm		

Compound map units

PGW52=SGL53	DRT22=PGW52
PGW52>DRT52	DRT52=PGW52
PGW52>DRT22	HFD53=PGW52
PGW52>FUH22	DRT22>PGW52
	DRT52>PGW52

Debert (DRT) soils are found in the low lying and depressional areas of the map unit.

Springhill (SGL) and Hansford (HFD) soils occur more often on the lower slopes.

Falmouth (FUH) soils usually occur on the crests and upper slopes of the map unit.

Comments

Pugwash 52 soils occur on all 21 map sheets, and make up one of largest soil groups in the survey area. In some areas, especially near river channels and coastal areas, Pugwash lower soil material may approach a sandy particle size. Surface materials having pockets of sands or gravels have been included with Pugwash map units. Unique soils included in Pugwash 52 map units are PGW50, PGW55, and PGW53.

PUGWASH 82 SOILS (PGW82)

Lower soil material and landform

Mode of origin	: Glacial till
Parent material	: Coarse loamy
Slope (ranges; mean)	: 1.0-4.0%; 3.0%
Drainage	: Well drained
Stoniness	: Nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: Absent
Kind of constricting layer	: Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	18-48	24	62
Particle size				
sand %	:	52-69	61	4
dominant sand size			Very fine	
silt %	:	26-43	32	4
clay %	:	5-11	7	4
Hydraulic conductivity (cm/h)	:	1.7-14.2	8.4	5
Bulk density (g/cm^3)	:	1.1-1.2	1.2	5
Organic carbon (%)	:	0.3-3.0	1.7	2
pH water	:	4.3-6.8	5.1	4
pH $CaCl_2$	:	3.0-6.4	4.3	4
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	7-62	33	62
Particle size				
sand %	:	48-63	56	4
dominant sand size			Fine	
silt %	:	28-43	33	4
clay %	:	7-15	11	4
Hydraulic conductivity (cm/h)	:	0.2-3.3	1.2	5
Bulk density (g/cm^3)	:	1.2-1.4	1.3	5
Organic carbon (%)	:	2.2-2.6	2.4	2
pH water	:	4.9-7.5	5.7	4
pH $CaCl_2$	:	4.0-6.5	4.7	4
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	44-73	62	12
dominant sand size			Very fine	
silt %	:	21-48	30	12
clay %	:	4-18	8	12
Hydraulic conductivity (cm/h)	:	0.2-0.9	0.5	5
Bulk density (g/cm^3)	:	1.7-1.8	1.7	5
pH water	:	4.7-7.3	5.7	12
pH $CaCl_2$	:	4.0-6.0	4.7	12
Consistence	:	Friable		

Compound map units

SGL53>PGW82 (see SGL description)

Comments

Pugwash 82 soils occur in the middle to western end of the survey area on the Welsford, Louisville, Brule, Balfron, Tatamagouche, Pugwash, West Pugwash, and West Linden map sheets (Fig. 1). The lower soil material may border on sandy especially near river channels and coastal areas. Surface materials having pockets of sands or gravels have been included with Pugwash map units. Cornwallis and Truro soils may be found in Pugwash 82 map units.

QUEENS 22 SOILS (QUE22)

Lower soil materials and landform

Mode of origin	:	Glacial till
Parent material	:	Fine loamy
Slope (ranges; mean)	:	2.0-7.0%; 3.0%
Drainage	:	Imperfect
Stoniness (ranges)	:	Nonstony to slightly stony; dominantly nonstony
Rockiness	:	Nonrocky
Depth to constricting layer (range; mean)	:	30-49 cm; 46 cm
Kind of constricting layer	:	Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	11-48	21	155
Particle size				
sand %	:	28-64	44	19
dominant sand size		Very fine		
silt %	:	29-55	43	19
clay %	:	6-20	13	19
Hydraulic conductivity (cm/h)	:	0.0-5.1	0.7	25
Bulk density (g/cm^3)	:	1.1-1.9	1.5	25
Organic carbon (%)	:	0.4-5.6	1.7	12
pH water	:	4.3-6.6	5.3	19
pH $CaCl_2$	:	3.7-5.9	4.6	19
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	10-72	25	155
Particle size				
sand %	:	13-64	42	15
dominant sand size		Very fine		
silt %	:	28-61	41	15
clay %	:	7-26	17	15
Hydraulic conductivity (cm/h)	:	0.0-0.8	0.1	20
Bulk density (g/cm^3)	:	1.5-1.8	1.6	20
Organic carbon (%)	:	0.2-6.5	1.6	6
pH water	:	4.5-6.8	5.4	14
pH $CaCl_2$	:	3.9-5.8	4.6	14
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	9-49	33	30
dominant sand size		Very fine		
silt %	:	32-61	43	30
clay %	:	18-32	24	30
Hydraulic conductivity (cm/h)	:	0.0-0.8	0.1	25
Bulk density (g/cm^3)	:	1.6-2.0	1.8	25
pH water	:	4.7-8.0	5.8	30
pH $CaCl_2$	:	3.8-6.9	4.9	30
Consistence	:	Firm		

Compound map units

QUE22=QUE52	DRT22=QUE22	KSV22=QUE22
QUE22>SGL52	DRT52=QUE22	DRT52>QUE22
QUE22>KSV22	FUH22=QUE22	KSV22>QUE22
	FUH52=QUE22	

Queens (QUE) 52 soils are found on the crest in the map unit.

Kingsville (KSV) soils are located in seepage areas and depressions in the map unit.

Springhill (SGL) soils are found on the lower slopes.

Comments

Queens 22 soils have been mapped on all map sheets east of the Middleboro map sheet except the Balfron map sheet (Fig. 1). The lower soil material is fine loamy but, in most cases, borders the coarse loamy particle size class. Queens map units may have inclusions of QUE23, QUE20, HTP20, HTP21, and HTP23. Queens soils are the most frequently mapped soils among the fine loamy soil groups in the survey area.

QUEENS 52 SOILS (QUE52)

Lower soil materials and landform

Mode of origin	: Glacial till
Lower soil material	: Fine loamy
Slope (ranges; mean)	: 2.0-8.0%; 3.5%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer	: 51-75 cm; 61 cm
Kind of constricting layer	: Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	8-47	25	139
Particle size				
sand %	:	26-54	43	15
dominant sand size		Very Fine		
silt %	:	35-60	45	15
clay %	:	9-20	12	15
Hydraulic conductivity (cm/h)	:	0.1-16.1	4.1	10
Bulk density (g/cm^3)	:	1.2-1.3	1.2	10
Organic carbon (%)	:	1.5-3.9	2.8	4
pH water	:	4.3-6.9	5.4	15
pH $CaCl_2$	:	3.2-6.2	4.7	15
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	14-65	36	139
Particle size				
sand %	:	28-54	45	16
dominant sand size		Very fine		
silt %	:	33-59	42	16
clay %	:	7-22	14	16
Hydraulic conductivity (cm/h)	:	0.1-2.0	1.0	5
Bulk density (g/cm^3)	:	1.5-1.6	1.5	5
Organic carbon (%)	:	0.4-0.6	0.5	3
pH water	:	4.9-6.9	5.9	16
pH $CaCl_2$	:	4.1-5.8	5.0	16
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	7-43	33	24
dominant sand size		Very fine		
silt %	:	35-64	44	24
clay %	:	18-31	23	24
Hydraulic conductivity (cm/h)	:	0.0-0.4	0.1	15
Bulk density (g/cm^3)	:	1.9-2.0	1.9	15
pH water	:	4.8-8.6	6.5	23
$CaCl_2$	:	4.0-7.5	5.4	23
Consistence	:	Firm		

Compound map units

QUE52>DRT52	DRT52=QUE52	FUH52>QUE52
QUE52>KSV22	QUE22=QUE52	

Kingsville (KSV): Kingsville soils are located in seepage areas and depressions of the map unit.

Debert (DRT): Debert soils are usually found on the lower slopes of the map unit.

Comments

Queens 52 soils have been mapped on all sheets east of South Wallace Bay (Fig. 1). The lower soil material is fine loamy but, in most cases, borders the coarse loamy family particle size. Queens map units may have inclusions of QUE50, QUE53, HTP50, HTP51, and HTP53.

SPRINGHILL 22 SOILS (SGL22)

Parent materials and landform

Mode of origin	: Glacial till
Parent material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 2.0-4.0%; 3.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to slightly stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 35-49 cm; 45 cm
Kind of constricting layer	: Compact basal till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-48	21	139
Particle size				
sand %	:	40-60	48	7
dominant sand size		Very fine		
silt %	:	32-48	41	7
clay %	:	8-17	11	7
Hydraulic conductivity (cm/h)	:	0.1-4.7	1.6	5
Bulk density (g/cm^3)	:	1.3-1.4	1.3	5
Organic carbon (%)	:	0.9-2.4	1.8	4
pH water	:	4.0-6.3	5.3	7
pH $CaCl_2$	:	3.3-5.3	4.6	7
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	8-41	24	139
Particle size				
sand %	:	37-63	53	7
dominant sand size		Fine		
silt %	:	28-49	38	7
clay %	:	4-14	9	7
Hydraulic conductivity (cm/h)	:	0.1-0.8	0.4	10
Bulk density (g/cm^3)	:	1.3-1.7	1.6	10
Organic carbon (%)	:	0.7-1.2	0.8	4
pH water	:	4.9-6.1	5.3	7
pH $CaCl_2$	:	4.2-5.2	4.5	7
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	32-72	49	12
dominant sand size		Very fine		
silt %	:	19-54	38	12
clay %	:	9-17	13	12
pH water	:	5.2-7.2	6.3	12
pH $CaCl_2$	:	4.2-6.2	5.3	12
Consistence	:	Firm		

Compound map units

SGL22=SGL52	HFD22=SGL22	ECY22>SGL22
ECY22=SGL22	DRT22>SGL22	

Springhill 52 (SGL52) soils are usually on the crests of the map unit.

Comments

Springhill 22 soils have been mapped on all sheets east of South Wallace Bay and also occur on the Northport and Pugwash River map sheets in the western end of the survey area (Fig. 1). Springhill map units may contain coarse loamy, sandy-gravelly, and sandy soil inclusions.

SPRINGHILL 52 SOILS (SGL52)

Lower soil materials and landform

Mode of origin	:	Glacial till
Lower soil material	:	Coarse loamy-gravelly
Slope (ranges; mean)	:	2.0-4.5%; 3.0%
Drainage	:	Imperfect
Stoniness (ranges)	:	Nonstony to slightly stony; dominantly nonstony
Rockiness	:	Nonrocky
Depth to constricting layer (range; mean)	:	50-62 cm; 57 cm
Kind of constricting layer	:	Compact till

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	10-51	23	124
Particle size				
sand %	:	33-64	51	6
dominant sand size			Fine	
silt %	:	29-51	38	6
clay %	:	6-17	11	6
Hydraulic conductivity (cm/h)	:	0.3-11.1	4.7	5
Bulk density (g/cm^3)	:	1.0-1.2	1.1	5
Organic carbon (%)	:	2.0-2.3	2.2	2
pH water	:	4.4-6.1	5.2	5
pH $CaCl_2$	:	3.9-5.6	4.5	5
Consistence	:	Friable		

B horizon		Range	Mean	Number
Thickness (cm)	:	14-68	34	124
Particle size				
sand %	:	38-72	55	6
dominant sand size			Fine	
silt %	:	24-45	34	6
clay %	:	4-17	11	6
Hydraulic conductivity (cm/h)	:	0.0-0.2	0.1	5
Bulk density (g/cm^3)	:	1.7-1.8	1.8	5
Organic carbon (%)	:	0.2-0.2	0.2	2
pH water	:	4.8-6.7	5.5	6
pH $CaCl_2$	:	3.8-5.6	4.6	6
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	46-65	55	8
dominant sand size			Fine	
silt %	:	26-40	34	8
clay %	:	5-17	11	8
pH water	:	4.8-6.8	5.6	8
pH $CaCl_2$	:	4.0-6.0	4.6	8
Consistence	:	Firm		

Compound map units

ECY22=SGL52
HFD52=SGL52
SGL22=SGL52
DRT52>SGL52
QUE22>SGL52

Comments

Springhill 52 soils have been mapped on all sheets east of South Wallace Bay and also occur on the Northport and Pugwash River map sheets (Fig. 1). Springhill map units may contain coarse loamy, sandy-gravelly, and, in some cases, sandy soil inclusions.

SPRINGHILL 53 SOILS (SGL53)

Parent materials and landform

Mode of origin	: Glacial till
Lower soil material	: Coarse loamy-gravelly
Slope (ranges; mean)	: 1.0-8.0%; 4.0%
Drainage	: Imperfect
Stoniness (ranges)	: Nonstony to moderately stony; dominantly nonstony
Rockiness	: Nonrocky
Depth to constricting layer (range; mean)	: 50-68 cm; 55 cm
Kind of constricting layer	: Compact basal till

Profile characteristics

<u>A horizon</u>		<u>Range</u>	<u>Mean</u>	<u>Number</u>
Thickness (cm)	:	10-50	23	259
Particle size				
sand %	:	46-64	57	12
dominant sand size			Fine	
silt %	:	27-43	35	12
clay %	:	5-13	8	12
Hydraulic conductivity (cm/h)	:	0.1-3.0	1.5	5
Bulk density (g/cm^3)	:	0.9-1.2	1.0	5
Organic carbon (%)	:	1.0-3.6	2.0	3
pH water	:	4.2-5.9	4.9	12
pH $CaCl_2$	:	3.3-5.3	4.3	12
Consistence	:	Friable		

<u>B horizon</u>		<u>Range</u>	<u>Mean</u>	<u>Number</u>
Thickness (cm)	:	8-59	32	259
Particle size				
sand %	:	38-69	57	12
dominant sand size			Fine	
silt %	:	24-42	34	12
clay %	:	4-21	9	12
Organic carbon (%)	:	0.3-3.2	1.8	3
pH water	:	4.8-6.4	5.3	12
pH $CaCl_2$	:	3.4-5.5	4.6	12
Consistence	:	Friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	29-77	54	20
dominant sand size			Very fine	
silt %	:	18-54	35	20
clay %	:	5-18	11	20
pH water	:	4.8-7.5	5.9	20
pH $CaCl_2$	:	3.5-6.1	4.8	20
Consistence	:	Firm		

Compound map units

SGL53>ECY53	HFD53=SGL53	HFD22>SGL53
SGL53>PGW82	PGW52=SGL53	HFD53>SGL53

Economy (ECY) soils are located in the low lying areas

Pugwash (PGW) soils generally occupy upper slope positions.

Comments

Springhill 53 soils have been mapped on all sheets east of Middleboro map sheet except for Hodson (Fig. 1). Springhill map units contain coarse loamy, sandy gravelly, and sandy soil inclusions.

STEWIACKE SOILS (STW)

Soil material and landform

Mode of origin	:	Alluvial
Soil material	:	Fine loamy
Slope (ranges; mean)	:	1.0-2.0%; 2.0%
Drainage	:	Poor
Stoniness	:	Nonstony
Rockiness	:	Nonrocky
Depth to constricting layer	:	Absent
Kind of constricting layer	:	Absent

Profile characteristics

A horizon		Range	Mean	Number
Thickness (cm)	:	15-76	24	40
Consistence	:	Friable - very friable		

C horizon		Range	Mean	Number
Particle size				
sand %	:	-----	35	1
dominant sand size		Very fine		
silt %	:	-----	42	1
clay %	:	-----	23	1
pH water	:	-----	6.6	1
pH $CaCl_2$	:	-----	5.7	1
Consistence	:	Friable		

Compound map units

Stewiacke soils have been mapped as pure units.

Comments

Stewiacke soils have been mapped on all sheets east of South Wallace Bay except for Lyons Brook, and on the Pugwash and Pugwash River map sheets (Fig. 1). Stewiacke map units usually exist as drainage channels between fine loamy till deposits or border river and stream beds. Inclusions of CYF, CHW, and CSY soils are common.

LAND TYPES

Coastal beaches (ZCB)

Coastal beach deposits consist of sands and sorted gravels. The unit is located only on map sheets which border the Northumberland Strait.

Gravel pits (ZGP)

This includes gravel pits, sand pits, quarries, and borrow pits.

Gullies (ZGY)

Gullies usually contain intermittent streams with a steep gradient. These map units are narrow, have steeply sloping sides, and may include some alluvial soils like CHW or STW.

Not surveyed (ZNS)

Portions of map sheets excluded from the project.

River course (ZRC)

River course map units include alluvial deposits along tidal river channels that are exposed at low tide and flooded at high tide.

Salt marsh (ZSM)

Salt marshes are periodically flooded by tidal waters and are generally composed of fine loamy sediments.

Urban land (ZUL)

The urban land map unit includes all urban oriented areas large enough to be delineated. Business and residential districts; landfill sites; golf courses; and Municipal, Federal and Provincial Parks were called urban land.

Water bodies (ZZZ)

Water bodies large enough to be delineated are coded ZZZ on digital maps. However, on the photomosaics included in this report, water bodies are simply coloured blue and not given a symbol.

PART 4. SOIL INTERPRETATIONS FOR AGRICULTURE

Introduction

Soil interpretations for agriculture are based on the evaluation of climate and soil characteristics that influence soil suitability for farming. Soils are grouped into classes and subclasses based on their limitations for rain fed farming (except for vegetables where irrigation is assumed), their suscepibility to degradation, and their response to management. Interpretations in this report are based on the following assumptions:

1. Good soil and crop management practices that are feasible are carried out. This includes the use of fertilizers, lime, artificial drainage, and proper weed and pest control. Surface ditching, land forming, and dyke maintenance are practiced for marine soils. Drainage is improved by one class where tile drainage is feasible. Tile drainage is feasible for all except the following:

   a) map units with slopes less than 2% or over 15%
   b) map units with rockiness classes of 4 or 5
   c) map units with stoniness classes of 4 or 5
   d) soils with bedrock within 80 cm of the surface
   e) soils subject to frequent or very frequent inundation
   f) organic soils.

2. Soils within a class have a similar degree of limitation although the kind of limitation may be different. Each class includes several soils which may require a different management system for crop production because of their different limitations. Subclasses provide information on the type of limitation while the class denotes the intensity of the limitation.

3. Only the most severe limitations are noted. For example, if the drainage limitation of a soil is 5W and its topographic limitation is 4T, the rating is 5W. A soil is rated 5TW only if the both the topographic and drainage limitations are 5.

4. Distance to market, availability of land transportation, size of farm, cultural patterns, and exceptional skill or resources of the farm operator are not criteria for this classification.

5. The interpretations are subject to change as new information on soil response to management becomes available. New technology or a change in economic conditions also require a new classification.

CLI capability classification for agriculture

The CLI Capability Classification for Agriculture groups soils into seven classes (Department of Environment 1972). The first three classes are considered capable of sustained production of common field crops, the fourth is marginal for sustained arable agriculture, the fifth is capable of use only for improved permanent pasture, the sixth is capable of use only for wild pasture, and the seventh class includes soils and land types considered incapable of sustained agricultural use. Although soils in classes one to four are capable for use for cultivated field crops, they are also capable for use as permanent pasture. For purposes of this classification, trees, shrubs, and ornamental plants that require little cultivation are not considered. The interpretations do apply to small grains, silage corn, and forage crops. Table 10 can be used to find the CLI ratings for map units described in this report.

Capability classes

Class 1. Soils in this class have no significant limitations for crop production. No map units in Nova Scotia are rated Class 1 because the regional climate (insufficient heat) is considered a limitation for optimal crop growth. Soils normally rated Class 1 were therefore reduced to Class 2 and assigned the subclass C.

Class 2. Soils in this class have moderate limitations that restrict the range of crops grown. The only limitation in this class in Nova Scotia is adverse climate.

Class 3. Soils in this class have moderately severe limitations that restrict the range of crops grown. In this class the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water, undesirable structure or low permeability, and coarse fragments.

Class 4. Soils in this class have severe limitations that restrict the range of crops or require special conservation practices or both. In this class the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water (applies to the continuing drainage of the soil after improvement, if feasible, by tile), undesirable structure or low permeability, and coarse fragments or the cumulative effect of three or more Class 3 limitations.

Class 5. Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops. Improvement practices are feasible. In this class, the type of limitation found may be one or more of the following: inundation, moisture limitation, stoniness, consolidated bedrock, topography, excess water (applies to the continuing drainage of the soil after improvement, if feasible, by tile), undesirable structure or low permeability, and coarse fragments or the cumulative effect of three or more Class 5 limitations.

Class 6. Soils in this class are capable only of producing perennial forage crops and improvement practices are not feasible. Most soils in Nova Scotia revert to forest if not maintained by man so map units normally keyed to Class 6 have been rated Class 7.

Class 7. Soils in this class have no capability for the production of common field crops or permanent pasture. In this class the type of limitation found may be topography or the cumulative effect of three or more Class 5 limitations.

Capability subclasses

Adverse climate (C). This subclass indicates inadequate heat for the optimal growth of a wide range of crops. It is used for Class 2 soils only.

Undesirable soil structure or slow permeability (D). This subclass is used for soils with a potential rooting zone restricted by conditions other than a high water table or consolidated bedrock (eg. compact till).

Coarse fragments (G). This subclass includes soils that contain enough coarse fragments to impede seed germination and optimum root development to increase the wear and tear on tillage machinery.

Inundation by streams or lakes (I). This subclass includes soils subjected to inundation causing crop damage or restricting agricultural use.

Moisture (M). This subclass consists of soils on which crops are adversely affected by lack of water owing to inherent soil characteristics.

Stoniness (P). This subclass includes map units sufficiently stony to significantly hinder tillage, planting and harvesting operations.

Consolidated bedrock (R). This subclass includes soils where the presence of bedrock near the surface restricts their agricultural use.

Topography (T). This subclass includes map units which are limited by topography. Higher percent slope increases the cost of farming by decreasing the uniformity of crop growth and maturity and by increasing the risk of water erosion.

Excess water (W). This subclass includes soils in which excess water other than that brought about by inundation is a limitation to use. Excess water may result from inadequate soil drainage, a high water table, seepage or run-off from surrounding areas.

Cumulative adverse characteristics (X). This subclass is made up of soils which have three or more limitations of the same degree. The soil is downgraded one class and assigned the X subclass.

How to use the CLI rating key

Step 1: Find, for each soil in the map unit:

- mode of deposition
- lower soil material particle size
- surface soil material (ie. friable soil) particle size
- depth of friable soil
- drainage
- slope

Step 2: Follow the key in table 10 to determine the CLI rating for each soil in the map unit.

Example 1: $\frac{\text{QUE52}}{\text{B}}$

mode of deposition	till	1.
subsoil particle size	fine loamy	1.1
friable soil particle size	coarse loamy	1.1.1.
depth of friable soil	50 - 80 cm	1.1.1.1.
drainage	imperfect	1.1.1.1.2.
slope	B (2 to 5%)	1.1.1.1.2.1

Final CLI rating for the simple map unit is 3W.

Example 2: $\frac{\text{QUE52>PGW82}}{\text{B}}$

Soil 1 - $\frac{\text{QUE52}}{\text{B}}$ see example 1

Soil 2 - $\frac{\text{PGW82}}{\text{B}}$

mode of deposition	till	1.
subsoil particle size	coarse loamy	1.1
friable soil particle size	coarse loamy	1.1.1.
depth of friable soil	>80 cm	1.1.1.1.
drainage	well	1.1.1.1.1.
slope	B (2 to 5%)	1.1.1.1.1.1

CLI rating for the second soil is 2C.

Final CLI rating for the compound map unit is 3W > 2C.

Table 10. Soil capability for agriculture key

For slopes of >30% (all soils)..............................7T

1. Mode of deposition: Till

    1.1 Subsoil particle size: fine loamy, coarse loamy, fine loamy-gravelly or coarse loamy-gravelly

        1.1.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

            1.1.1.1 Depth to compact subsoil: >50 cm

                1.1.1.1.1 Drainage: well or moderately well
                    1.1.1.1.1.1 Slope: 0 to 5% 2C
                    1.1.1.1.1.2 Slope: 5 to 9% 3T
                    1.1.1.1.1.3 Slope: 9 to 15% 4T
                    1.1.1.1.1.4 Slope: 15 to 30% 5T

                1.1.1.1.2 Drainage: imperfect
                    1.1.1.1.2.1 Slope: 0 to 2% 3W
                    1.1.1.1.2.2 Slope: 2 to 5% 2C
                    1.1.1.1.2.3 Slope: 5 to 9% 3T
                    1.1.1.1.2.4 Slope: 9 to 15% 4T
                    1.1.1.1.2.5 Slope: 15 to 30% 5T

                1.1.1.1.3 Drainage: poor
                    1.1.1.1.3.1 Slope: 0 to 2% 5W
                    1.1.1.1.3.2 Slope: 2 to 5% 3W
                    1.1.1.1.3.3 Slope: 5 to 9% 3TW
                    1.1.1.1.3.4 Slope: 9 to 15% 4T
                    1.1.1.1.3.5 Slope: 15 to 30% 5T

            1.1.1.2 Depth to compact subsoil: 20 to 50 cm

                1.1.1.2.1 Drainage: well or moderately well
                    1.1.1.2.1.1 Slope: 0 to 5% 3D
                    1.1.1.2.1.2 Slope: 5 to 9% 3DT
                    1.1.1.2.1.3 Slope: 9 to 15% 4T
                    1.1.1.2.1.4 Slope: 15 to 30% 5T

                1.1.1.2.2 Drainage: imperfect
                    1.1.1.2.2.1 Slope: 0 to 2% 4W
                    1.1.1.2.2.2 Slope: 2 to 5% 3D
                    1.1.1.2.2.3 Slope: 5 to 9% 3DT
                    1.1.1.2.2.4 Slope: 9 to 15% 4T
                    1.1.1.2.2.5 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

1.1.1.2.3 Drainage: poor
- 1.1.1.2.3.1 Slope: 0 to 2% 5W
- 1.1.1.2.3.2 Slope: 2 to 9% 4W
- 1.1.1.2.3.3 Slope: 9 to 15% 4TW
- 1.1.1.2.3.4 Slope: 15 to 30% 5T

1.1.2 Surface material particle size: fine loamy or fine loamy-gravelly

1.1.2.1 Depth to compact subsoil: 20 to 50 cm

1.1.2.1.2 Drainage: imperfect
- 1.1.2.1.2.1 Slope: 0 to 9% 4DW
- 1.1.2.1.2.2 Slope: 9 to 15% 5X
- 1.1.2.1.2.3 Slope: 15 to 30% 5T

1.1.2.1.3 Drainage: poor
- 1.1.2.1.3.1 Slope: 0 to 15% 5DW
- 1.1.2.1.3.2 Slope: 15 to 30% 7X

1.2 Subsoil particle size: skeletal-loamy

1.2.1 Surface material particle size: coarse loamy gravelly

1.2.1.1 Depth of surface material: 50 to 80 cm

1.2.1.1.1 Drainage: well
- 1.2.1.1.1.1 Slope: 0 to 5% 2C
- 1.2.1.1.1.2 Slope: 5 to 9% 3T
- 1.2.1.1.1.3 Slope: 9 to 15% 4T
- 1.2.1.1.1.4 Slope: 15 to 30% 5T

1.2.1.1.2 Drainage: imperfect
- 1.2.1.1.2.1 Slope: 0 to 2% 3W
- 1.2.1.1.2.2 Slope: 2 to 5% 2C
- 1.2.1.1.2.3 Slope: 5 to 9% 3T
- 1.2.1.1.2.4 Slope: 9 to 15% 4T
- 1.2.1.1.2.5 Slope: 15 to 30% 5T

1.2.1.1.3 Drainage: poor
- 1.2.1.1.3.1 Slope: 0 to 2% 5W
- 1.2.1.1.3.2 Slope: 2 to 5% 3W
- 1.2.1.1.3.3 Slope: 5 to 9% 3TW
- 1.2.1.1.3.4 Slope: 9 to 15% 4T
- 1.2.1.1.3.5 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

1.2.1.2 Depth of surface material: 20 to 50 cm

1.2.1.2.1 Drainage: well
1.2.1.2.1.1 Slope: 0 to 5% 3G
1.2.1.2.1.2 Slope: 5 to 9% 3GT
1.2.1.2.1.3 Slope: 9 to 15% 4T
1.2.1.2.1.4 Slope: 15 to 30% 5T

1.2.1.2.2 Drainage: imperfect
1.2.1.2.2.1 Slope: 0 to 2% 3GW
1.2.1.2.2.2 Slope: 2 to 5% 3G
1.2.1.2.2.3 Slope: 5 to 9% 3GT
1.2.1.2.2.4 Slope: 9 to 15% 4T
1.2.1.2.2.5 Slope: 15 to 30% 5T

1.2.1.2.3 Drainage: poor
1.2.1.2.3.1 Slope: 0 to 2% 5W
1.2.1.2.3.2 Slope: 2 to 5% 3GW
1.2.1.2.3.3 Slope: 5 to 9% 4X
1.2.1.2.3.4 Slope: 9 to 15% 4T
1.2.1.2.3.5 Slope: 15 to 30% 5T

1.2.2 Surface material particle size: skeletal-loamy

1.2.2.1 Depth to compact subsoil: >80 cm

1.2.2.1.1 Drainage: well
1.2.2.1.1.1 Slope: 0 to 9% 4G
1.2.2.1.1.2 Slope: 9 to 15% 4GT
1.2.2.1.1.3 Slope: 15 to 30% 5T

1.2.2.1.2 Drainage: imperfect
1.2.2.1.2.1 Slope: 0 to 9% 4G
1.2.2.1.2.2 Slope: 9 to 15% 4GT
1.2.2.1.2.3 Slope: 15 to 30% 5T

1.2.2.1.3 Drainage: poor
1.2.2.1.3.1 Slope: 0 to 2% 5W
1.2.2.1.3.2 Slope: 2 to 9% 4GW
1.2.2.1.3.3 Slope: 9 to 15% 5X
1.2.2.1.3.4 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

1.3 Subsoil particle size: bedrock

1.3.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

1.3.1.1 Depth of surface material: 50 to 80 cm

1.3.1.1.1 Drainage: well
1.3.1.1.1.1 Slope: 0 to 5% 3R
1.3.1.1.1.2 Slope: 5 to 9% 3RT
1.3.1.1.1.3 Slope: 9 to 15% 4T
1.3.1.1.1.4 Slope: 15 to 30% 5T

1.3.1.1.2 Drainage: imperfect
1.3.1.1.2.1 Slope: 0 to 5% 3RW
1.3.1.1.2.2 Slope: 5 to 9% 4X
1.3.1.1.2.3 Slope: 9 to 15% 4T
1.3.1.1.2.4 Slope: 15 to 30% 5T

1.3.1.1.3 Drainage: poor
1.3.1.1.3.1 Slope: 0 to 15% 5W
1.3.1.1.3.2 Slope: 15 to 30% 5TW

1.3.1.2 Depth of surface material: 20 to 50 cm

1.3.1.2.1 Drainage: well
1.3.1.2.1.1 Slope: 0 to 15%.........5R
1.3.1.2.1.2 Slope: 15 to 30% 5RT
1.3.1.2.2 Drainage: imperfect
1.3.1.2.2.1 Slope: 0 to 15%.........5R
1.3.1.2.2.2 Slope: 15 to 30% 5RT
1.3.1.2.3 Drainage: poor
1.3.1.2.3.1 Slope: 0 to 15% 5RW
1.3.1.2.3.2 Slope: 15 to 30% 7X

1.3.2 Surface material particle size: skeletal-loamy

1.3.2.1 Depth of surface material: 50 to 80 cm
1.3.2.1.1 Drainage: well
1.3.2.1.1.1 Slope: 0 to 5% 3GR
1.3.2.1.1.2 Slope: 5 to 9% 4X
1.3.2.1.1.3 Slope: 9 to 15% 4T
1.3.2.1.1.4 Slope: 15 to 30% 5T

1.3.2.1.2 Drainage: imperfect
1.3.2.1.2.1 Slope: 0 to 5% 3GR
1.3.2.1.2.2 Slope: 5 to 9% 4X
1.3.2.1.2.3 Slope: 9 to 15% 4T
1.3.2.1.2.4 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

1.3.2.1.3 Drainage: poor
- 1.3.2.1.3.1 Slope: 0 to 9% 5W
- 1.3.2.1.3.2 Slope: 9 to 15% 5X
- 1.3.2.1.3.3 Slope: 15 to 30% 5T

1.3.2.2 Depth of surface material: 20 to 50 cm

1.3.2.2.1 Drainage: well
- 1.3.2.2.1.1 Slope: 0 to 15% 5R
- 1.3.2.2.1.2 Slope: 15 to 30% 5RT

1.3.2.2.2 Drainage: imperfect
- 1.3.2.2.2.1 Slope: 0 to 15% 5R
- 1.3.2.2.2.3 Slope: 15 to 30% 5RT

1.3.2.2.3 Drainage: poor
- 1.3.2.2.3.1 Slope: 0 to 15% 5RW
- 1.3.2.2.3.2 Slope: 15 to 30% 7X

2. Mode of deposition: Glaciofluvial

2.1 Subsoil particle size: skeletal-sandy or sandy-gravelly

2.1.1 Surface material particle size: coarse loamy or coarse loamy-gravelly

2.1.1.1 Depth of surface material: 50 to 80 cm

2.1.1.1.1 Drainage: well
- 2.1.1.1.1.1 Slope: 0 to 5% 2C
- 2.1.1.1.1.2 Slope: 5 to 9% 3T
- 2.1.1.1.1.3 Slope: 9 to 15% 4T
- 2.1.1.1.1.4 Slope: 15 to 30% 5T

2.1.1.1.2 Drainage: imperfect
- 2.1.1.1.2.1 Slope: 0 to 2% 3W
- 2.1.1.1.2.2 Slope: 2 to 5% 2C
- 2.1.1.1.2.3 Slope: 5 to 9% 3T
- 2.1.1.1.2.4 Slope: 9 to 15% 4T
- 2.1.1.1.2.5 Slope: 15 to 30% 5T

2.1.1.1.3 Drainage: poor
- 2.1.1.1.3.1 Slope: 0 to 2% 5W
- 2.1.1.1.3.2 Slope: 2 to 5% 3W
- 2.1.1.1.3.3 Slope: 5 to 9% 3TW
- 2.1.1.1.3.4 Slope: 9 to 15% 4T
- 2.1.1.1.3.5 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

2.1.1.2 Depth of surface material: 20 to 50 cm

2.1.1.2.1 Drainage: rapid
2.1.1.2.1.1 Slope: 0 to 5% 3M
2.1.1.2.1.2 Slope: 5 to 9% 3MT
2.1.1.2.1.3 Slope: 9 to 15% 4T
2.1.1.2.1.4 Slope: 15 to 30% 5T

2.1.1.2.2 Drainage: imperfect
2.1.1.2.2.1 Slope: 0 to 2% 3MW
2.1.1.2.2.2 Slope: 2 to 5% 3M
2.1.1.2.2.3 Slope: 5 to 9% 3MT
2.1.1.2.2.4 Slope: 9 to 15% 4T
2.1.1.2.2.5 Slope: 15 to 30% 5T

2.1.1.2.3 Drainage: poor
2.1.1.2.3.1 Slope: 0 to 2% 5W
2.1.1.2.3.2 Slope: 2 to 5% 3MW
2.1.1.2.3.3 Slope: 5 to 9% 4X
2.1.1.2.3.4 Slope: 9 to 15% 4T
2.1.1.2.3.5 Slope: 15 to 30% 5T

2.1.2 Surface material particle size: sandy

2.1.2.1 Depth of surface material: 50 to 80 cm

2.1.2.1.1 Drainage: rapid
2.1.2.1.1.1 Slope: 0 to 5% 3M
2.1.2.1.1.2 Slope: 5 to 9% 3MT
2.1.2.1.1.3 Slope: 9 to 15% 4T
2.1.2.1.1.4 Slope: 15 to 30% 5T

2.1.2.1.2 Drainage: imperfect
2.1.2.1.2.1 Slope: 0 to 5% 3MW
2.1.2.1.2.2 Slope: 5 to 9% 4X
2.1.2.1.2.3 Slope: 9 to 15% 4T
2.1.2.1.2.4 Slope: 15 to 30% 5T

2.1.2.1.3 Drainage: poor
2.1.2.1.3.1 Slope: 0 to 9% 4MW
2.1.2.1.3.2 Slope: 9 to 15% 5X
2.1.2.1.3.3 Slope: 15 to 30% 5T

(continued)

2.1.2.2 Depth of surface material: 20 to 50 cm

2.1.2.2.1 Drainage: rapid
- 2.1.2.2.1.1 Slope: 0 to 9% 4M
- 2.1.2.2.1.2 Slope: 9 to 15% 4MT
- 2.1.2.2.1.3 Slope: 15 to 30% 5T

2.1.2.2.2 Drainage: imperfect
- 2.1.2.2.2.1 Slope: 0 to 5% 3MW
- 2.1.2.2.2.2 Slope: 5 to 9% 4X
- 2.1.2.2.2.3 Slope: 9 to 15% 4T
- 2.1.2.2.2.4 Slope: 15 to 30% 5T

2.1.2.2.3 Drainage: poor
- 2.1.2.2.3.1 Slope: 0 to 9% 4MW
- 2.1.2.2.3.2 Slope: 9 to 15% 5X
- 2.1.2.2.3.3 Slope: 15 to 30% 5T

2.1.3 Surface material particle size: skeletal-sandy or sandy-gravelly

2.1.3.1 Depth of surface material: >80 cm

2.1.3.1.1 Drainage: rapid
- 2.1.3.1.1.1 Slope: 0 to 9% 4M
- 2.1.3.1.1.2 Slope: 9 to 15% 4MT
- 2.1.3.1.1.3 Slope: 15 to 30% 5T

2.1.3.1.2 Drainage: imperfect
- 2.1.3.1.2.1 Slope: 0 to 5% 3MW
- 2.1.3.1.2.2 Slope: 5 to 9% 4X
- 2.1.3.1.2.3 Slope: 9 to 15% 4T
- 2.1.3.1.2.4 Slope: 15 to 30% 5T

2.1.3.1.3 Drainage: poor
- 2.1.3.1.3.1 Slope: 0 to 9% 4MW
- 2.1.3.1.3.2 Slope: 9 to 15% 5X
- 2.1.3.1.3.3 Slope: 15 to 30% 5T

2.2 Subsoil particle size: sandy

2.2.1 Surface material particle size: sandy-fine

2.2.1.1 Depth of surface material: 50 to 80 cm

2.2.1.1.1 Drainage: well
- 2.2.1.1.1.1 Slope: 0 to 5% 2C
- 2.2.1.1.1.2 Slope: 5 to 9% 3T
- 2.2.1.1.1.3 Slope: 9 to 15% 4T
- 2.2.1.1.1.4 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

2.2.1.1.2 Drainage: imperfect
- 2.2.1.1.2.1 Slope: 0 to 2% 3W
- 2.2.1.1.2.2 Slope: 2 to 5% 2C
- 2.2.1.1.2.3 Slope: 5 to 9% 3T
- 2.2.1.1.2.4 Slope: 9 to 15% 4T
- 2.2.1.1.2.5 Slope: 15 to 30% 5T

2.2.1.1.3 Drainage: poor
- 2.2.1.1.3.1 Slope: 0 to 2% 5W
- 2.2.1.1.3.2 Slope: 2 to 5% 3W
- 2.2.1.1.3.3 Slope: 5 to 9% 3TW
- 2.2.1.1.3.4 Slope: 9 to 15% 4T
- 2.2.1.1.3.5 Slope: 15 to 30% 5T

2.2.2 Surface material particle size: sandy

2.2.2.1 Depth of surface material: >80 cm
(ortstein soils are included here)

2.2.2.1.1 Drainage: rapid
- 2.2.2.1.1.1 Slope: 0 to 5% 3M
- 2.2.2.1.1.2 Slope: 5 to 9% 3MT
- 2.2.2.1.1.3 Slope: 9 to 15% 4T
- 2.2.2.1.1.4 Slope: 15 to 30% 5T

2.2.2.1.2 Drainage: imperfect
- 2.2.2.1.2.1 Slope: 0 to 5% 3MW
- 2.2.2.1.2.3 Slope: 5 to 9% 4X
- 2.2.2.1.2.4 Slope: 9 to 15% 4T
- 2.2.2.1.2.5 Slope: 15 to 30% 5T

2.2.2.1.3 Drainage: poor
- 2.2.2.1.3.1 Slope: 0 to 2% 5W
- 2.2.2.1.3.2 Slope: 2 to 5% 3W
- 2.2.2.1.3.3 Slope: 5 to 9% 3TW
- 2.2.2.1.3.4 Slope: 9 to 15% 4T
- 2.2.2.1.3.5 Slope: 15 to 30% 5T

2.3 Subsoil particle size: sandy-fine

2.3.1 Surface material particle size: sandy-fine

2.3.1.1 Depth of surface material: >80 cm

2.3.1.1.1 Drainage: well
- 2.3.1.1.1.1 Slope: 0 to 5% 2C
- 2.3.1.1.1.2 Slope: 5 to 9% 3T
- 2.3.1.1.1.3 Slope: 9 to 15% 4T
- 2.3.1.1.1.4 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

2.3.1.1.2 Drainage: imperfect
- 2.3.1.1.2.1 Slope: 0 to 2% 3W
- 2.3.1.1.2.2 Slope: 2 to 5% 2C
- 2.3.1.1.2.3 Slope: 5 to 9% 3T
- 2.3.1.1.2.4 Slope: 9 to 15% 4T
- 2.3.1.1.2.5 Slope: 15 to 30% 5T

2.3.1.1.3 Drainage: poor
- 2.3.1.1.3.1 Slope: 0 to 2% 5W
- 2.3.1.1.3.2 Slope: 2 to 5% 3W
- 2.3.1.1.3.3 Slope: 5 to 9% 3TW
- 2.3.1.1.3.4 Slope: 9 to 15% 4T
- 2.3.1.1.3.5 Slope: 15 to 30% 5T

2.3.2 Surface material particle size: coarse loamy

2.3.2.1 Depth of surface material: 20-80 cm (orstein soils included here)

2.3.2.1.1 Drainage: well
- 2.3.2.1.1.1 Slope: 0 to 5% 2C
- 2.3.2.1.1.2 Slope: 5 to 9% 3T
- 2.3.2.1.1.3 Slope: 9 to 15% 4T
- 2.3.2.1.1.4 Slope: 15 to 30% 5T

2.3.2.1.2 Drainage: imperfect
- 2.3.2.1.2.1 Slope: 0 to 2% 3W
- 2.3.2.1.2.2 Slope: 2 to 5% 2C
- 2.3.2.1.2.3 Slope: 5 to 9% 3T
- 2.3.2.1.2.4 Slope: 9 to 15% 4T
- 2.3.2.1.2.5 Slope: 15 to 30% 5T

2.3.2.1.3 Drainage: poor
- 2.3.2.1.3.1 Slope: 0 to 2% 5W
- 2.3.2.1.3.2 Slope: 2 to 5% 3W
- 2.3.2.1.3.3 Slope: 5 to 9% 3TW
- 2.3.2.1.3.4 Slope: 9 to 15% 4T
- 2.3.2.1.3.5 Slope: 15 to 30% 5T

2.3.3 Surface material particle size: sandy

2.3.3.1 Depth of surface material: 50-80 cm

2.3.3.1.1 Drainage: well
- 2.3.3.1.1.1 Slope: 0 to 5% 3M
- 2.3.3.1.1.2 Slope: 5 to 9% 3MT
- 2.3.3.1.1.3 Slope: 9 to 15% 4T
- 2.3.3.1.1.4 Slope: 15 to 30% 5T

(continued)

Table 10. Soil capability for agriculture key (continued)

2.3.3.1.2 Drainage: imperfect
- 2.3.3.1.2.1 Slope: 0 to 5% 3MW
- 2.3.3.1.2.3 Slope: 5 to 9% 4X
- 2.3.3.1.2.4 Slope: 9 to 15% 4T
- 2.3.3.1.2.5 Slope: 15 to 30% 5T

2.3.3.1.3 Drainage: poor
- 2.3.3.1.3.1 Slope: 0 to 2% 5W
- 2.3.3.1.3.2 Slope: 2 to 5% 3W
- 2.3.3.1.3.3 Slope: 5 to 9% 3TW
- 2.3.3.1.3.4 Slope: 9 to 15% 4T
- 2.3.3.1.3.5 Slope: 15 to 30% 5T

3. Mode of deposition: Lacustrine

3.1 Subsoil particle size: fine loamy

3.1.1 Surface material particle size: fine loamy

3.1.1.1 Depth of surface material: >80 cm

3.1.1.1.2 Drainage: imperfect
- 3.1.1.1.2.1 Slope: 0 to 5% 4DW

3.1.1.1.3 Drainage: poor
- 3.1.1.1.3.1 Slope: 0 to 5% 5DW

3.1.2 Surface material particle size: coarse loamy

3.1.2.1 Depth of surface material: 50 to 80 cm

3.1.2.1.1 Drainage: moderately well
- 3.1.2.1.1.1 Slope: 0 to 5% 2C

3.1.2.1.2 Drainage: imperfect
- 3.1.2.1.2.1 Slope: 0 to 2% 3W
- 3.1.2.1.2.2 Slope: 2 to 5% 2C

3.1.2.1.3 Drainage: poor
- 3.1.2.1.3.1 Slope: 0 to 2% 5W
- 3.1.2.1.3.2 Slope: 2 to 5% 3W

(continued)

Table 10. Soil capability for agriculture key (continued)

3.1.3 Surface material particle size: sandy or sandy-fine

3.1.3.1 Depth of surface material: 50 to 80 cm

3.1.3.1.1 Drainage: moderately well
3.1.3.1.1.1 Slope: 0 to 5% 3M

3.1.3.1.2 Drainage: imperfect
3.1.3.1.2.1 Slope: 0 to 5% 3MW

3.1.3.1.3 Drainage: poor
3.1.3.1.3.1 Slope: 0 to 2% 5W
3.1.3.1.3.2 Slope: 2 to 5% 3W

4. Mode of deposition: Alluvium

4.1 Subsoil particle size: fine loamy or coarse loamy

4.1.1 Surface material particle size: any

4.1.1.1 Depth of surface material: any

4.2.1.1.1 Drainage: well
4.2.1.1.1.1 Slope: 0 to 5% 3I

4.2.1.1.2 Drainage: imperfect
4.2.1.1.2.1 Slope: 0 to 5% 4IW

4.2.1.1.3 Drainage: poor
4.2.1.1.3.1 Slope: 0 to 5% 5IW

5. Mode of deposition: Marine

5.1 Subsoil particle size: fine loamy or coarse loamy

5.1.1 Surface material particle size: any

5.1.1.1 Depth of surface material: >80 cm

5.1.1.1.1 Drainage: moderately well
5.1.1.1.1.1 Slope: 0 to 5% 2C

5.1.1.1.2 Drainage: imperfect
5.1.1.1.2.1 Slope: 0 to 5% 3DW

5.1.1.1.3 Drainage: poor
5.1.1.1.3.1 Slope: 0 to 5% 4DW

(continued)

Table 10. Soil capability for agriculture key (continued)

For surface stoniness, apply the following rules:

Original rating from key	Map unit stoniness class	Adjusted final CLI rating
2	S3	3P
3 one subclass	S3	3P + subclass *
3 two subclasses	S3	4X
2, 3, or 4	S4	5P
5 one subclass	S4	5P + subclass *
5 two subclasses	S4	7X
2, 3, 4, or 5	S5	7P
7 one subclass	S5	7P + subclass *
7 two subclasses	S5	NO CHANGE

* exclude if subclass='X'

Soil suitability for selected crops

Guidelines for assessing soil suitability for seven crops are given in Tables 11 to 17. The degree of suitability (good, fair, poor, or unsuitable) is determined by the most restrictive soil factor(s). For example, if the degree of suitability is "good" for all but one soil factor, and that factor has a degree of suitability of "poor," then the overall rating of the soil is "poor" with a single subclass to show the limitation. If two factors are rated "poor" then both limitations are shown in the subclass.

Limitations can have a cumulative effect for "fair" and "poor" ratings. If three or more properties are rated as such, then the overall rating for the soil is downgraded one class and the limitation is "x".

Suitability class ratings

Evaluation of soil suitability for growing agricultural crops is based on internal and external soil characteristics only. Four soil suitability classes are used to evaluate both mineral and organic soil map units.

Good (G). Soils in their present state have few or minor limitations that affect crop production. Limitations that are present can be easily overcome.

Fair (F). Soils in their present state have one or two moderate limitations that affect crop production. These can be overcome with special management or soil improvement measures.

Poor (P). Soils in their present state have one or two severe limitations which affect crop production. These can be overcome only with difficult and costly soil improvement or very careful management.

Unsuitable (U). Soils in their present state have one or more features that are so limiting that improvement efforts would be considered economically impractical.

Suitability subclass definitions

Depth of friable soil material (a). Depth of friable soil material refers to the available rooting depth. Rooting depth is controlled by subsoil layers which act as barriers to root penetration. Compact till, ortstein layers, and fragipan layers are examples.

Particle size of the friable soil material (b). Particle size distribution refers to grain size -- how much sand, silt, clay and coarse fragments are present. Particle size affects moisture retention characteristics, trafficablility, surface crusting characteristics, and the rate at which water moves through soil. Table 4 shows the codes used in the interpretive tables.

Flooding (c). Flooding occurs when water overflows the natural or artificial confines of a stream or other body of water and accumulates on adjacent land areas. Flooding at any time of the year is hazardous to the survival and growth of perennial crops. Flooding during the growing season can be hazardous to the growth and survival of annual crops and can hinder planting and harvesting operations. Flooding can damage soils by eroding valuable topsoil and the eroded sediments can pollute adjacent water resources. The following flooding classes are used to define the relative degrees of flooding.

None (N). Soils are not susceptible to flooding.

Occasional (O). Soils are subjected to flooding of short duration once or twice a year.

Frequent (F). Soils are subjected to flooding of medium duration more than once a year.

Very frequent (VF). Soils are subjected to prolonged flooding every year.

Surface stoniness (d). Rock fragments in the topsoil interfere with the efficient operation of farm machinery for cultivation, seedbed preparation, and harvesting. The degree of limitation which stones impose is related to their number, size and spacing at the soil surface.

Rockiness Class (e). Bedrock outcrops are incapable of supporting crops and interfere with the efficient operation of farm machinery. The degree of limitation is related to the percentage of surface area covered by exposed bedrock.

Slope (f). This is steepness of slope reported in percent. Slope affects the safe use of farm machinery and the surface drainage of water. Run-off from sloping cultivated fields can cause severe soil erosion problems. Run-off from nearly level land may be insufficient to prevent the ponding of surface water.

Soil Drainage (g). Soil drainage refers to the rapidity and extent of removal of water from a soil in relation to additions. It is affected by several factors acting separately or in combination, including texture, structure, slope gradient, length of slope, water holding capacity and evapotranspiration. Excess soil water adversely affects crop growth and the trafficability of farm machinery. Wet soils are slow to warm up in spring and have poor aeration. Rapidly drained soils are prone to drought. The following classes are defined in terms of available water storage capacity and source of water.

Rapidly drained (R). Water is removed rapidly in relation to supply. Excess water flows downward if underlying material is pervious. Subsurface flow may occur on steep gradients during heavy rainfall. Soils have low available water storage capacity within 1 m and are usually coarse textured, or shallow, or both. Water source is precipitation.

Well drained (W). Water is removed from the soil readily but not rapidly. Excess water flows downward readily into underlying pervious material or laterally as subsurface flow. Soils have intermediate available water storage capacity within 1 meter, and are generally intermediate in depth and texture. Water source is precipitation. On slopes, subsurface flow may occur for short durations but additions equal losses.

Moderately well drained (MW). Water is removed from the soil somewhat slowly in relation to supply because of low soil permeability, shallow water table, lack of gradient, or some combination of these. Soils have intermediate to high water storage capacity within 1 m and are usually medium to fine textured. Precipitation is the dominant water source in medium to fine textured soils. Precipitation and significant additions by subsurface flow are necessary in coarse textured soils.

Imperfectly drained I. Water is removed from the soil sufficiently slowly in relation to supply to keep the soil wet for a significant part of the growing season. Excess water moves slowly downward if precipitation is the major source. If subsurface water or groundwater, or both, is the main source, the flow rate may vary but the soil remains wet for a significant part of the growing season. Precipitation is the main water source if the available water capacity is high. Contributions by subsurface flow or groundwater flow, or both, increases as available water storage capacity decreases. Soils have a wide range in available water supply, texture, and depth.

Poorly drained (P). Water is removed so slowly in relation to supply that the soil remains wet for a large part of the time the soil is not frozen. Excess water is evident in the soil for a large part of the growing season. Subsurface flow or groundwater flow or both, and precipitation are the main water sources. There may also be a perched water table. Soils have a wide range in available water storage capacity, texture and depth.

Very poorly drained (VP). Water is removed from the soil so slowly that the water table remains at or on the surface for the greater part of the time the soil is not frozen. Excess water is present in the soil for the greater part of the growing season. Groundwater flow and subsurface flow are the major water sources. Precipitation is less important except where there is a perched water table with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture and depth.

Table 11. Soil suitability for alfalfa

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	---	20-50	<20
Particle size of friable soil (b)	2,3	0,1 4,7	5	6,8,9
Flooding (c)	N	---	O	F,VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	C,D	B,E	F	G
Drainage (g)	W	MW,R	I	P,VP

Modified from: Holmstrom 1986.

Table 12. Soil suitability for apples

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>80	50-80	20-50	<20
Particle size of friable soil (b)	2,3,4	5,7	0,1	9,6,8
Flooding (c)	N	---	---	O,F,VF
Stoniness (d)	0-2	3	---	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C,D	E	F	G
Drainage (g)	W	MW,R	I	P,VP

Modified from: Michalica 1983.
Webster, D. Kentville Research Station, NS. personal comm.

Table 13. Soil suitability for spring cereals

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,3,4	(0,1)[1] 5	6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C	D	E	F,G
Drainage (g)	W,MW	I,R	P	VP

Modified from: Holmstrom 1986.
[1]Downgrade one class if drainage is imperfect.

Table 14. Soil suitability for winter cereals

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	---	20-50	<20
Particle size of friable soil (b)	2,3,4	5	0,1 6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	C	D,B	E	F,G
Drainage (g)	R,W,MW	I	P	VP

Modified from: Holmstrom 1986.

Table 15. Soil suitability for corn

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,3	(0,1)[1] 4	5,6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B	C	D	E,F,G
Drainage (g)	W,MW	I,R	P	VP

Modified from: Wang and Rees 1983.
[1]Downgrade one class if drainage is imperfect.

Table 16. Soil suitability for forage

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>20	---	---	<20
Particle size of friable soil (b)	2,3,4	0,1 7,5	6,8	9
Flooding (c)	N,O	F	---	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B,C,D	E	F	G
Drainage (g)	W,MW	I,R	P	VP

Modified from: MacMillan 1983.

Table 17. Soil suitability for vegetables[1]

Soil factors (symbol)	Degree of suitability			
	Good	Fair	Poor	Unsuitable
Depth of friable soil in cm (a)	>50	20-50	---	<20
Particle size of friable soil (b)	2,4,5	(0,1)[2] 3	6,7	8,9
Flooding (c)	N	O	F	VF
Stoniness (d)	0-1	2	3	4-5
Rockiness (e)	0	1	---	2-5
Slope (f)	B	C	D	E,F,G
Drainage (g)	R,W,MW	I	P	VP

Modified from: Wang and Rees 1983.
[1]Irrigation is assumed.
[2]Downgrade one class if drainage is imperfect.

Ratings

The interpretations (Table 19) were output from dBase III+ computer programs which followed the guidelines presented in Table 7 and Tables 11 to 18. Steps in the process were as follows:

1. A list of soil map unit names from the maps was produced.

2. For each map unit, the attribute values for the first soil, second soil and landscape features were entered. The soil attributes are shown in Table 18; landscape attributes are imbedded in the map unit symbol (Fig. 9).

3. The appropriate program was run (e.g. forages, CLI, etc.) against the map units to produce crop ratings.

4. The results were formatted and printed.

Table 18. Soil attributes used for interpretations

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of deposition	PSD of lower soil material
ACA	90	I	N	MARI	FNL
AVP52	60	MW	N	LACU	FNL
AVP54	60	MW	N	LACU	FNL
AVP82	90	MW	N	LACU	FNL
BGE	90	I	F	FLUV	COL
CAA21	40	P	N	TILL	ROCK
CAA23	40	P	N	TILL	ROCK
CAA27	40	P	N	TILL	ROCK
CAA51	60	P	N	TILL	ROCK
CAA52	60	P	N	TILL	ROCK
CAA53	60	P	N	TILL	ROCK
CAA57	60	P	N	TILL	ROCK
CBR	90	W	O	FLUV	COL
CGN	90	P	N	MARI	FNL
CHW	90	P	VF	FLUV	COL
CMU22	90	I	N	GLFL	SK-S
CMU23	90	I	N	GLFL	SK-S
CMU52	90	I	N	GLFL	SK-S
CMU53	90	I	N	GLFL	SK-S
CMU54	90	I	N	GLFL	SK-S
CMU55	90	I	N	GLFL	SK-S
CMU83	90	I	N	GLFL	SK-S
CMU86	90	I	N	GLFL	SK-S
CMU88	90	I	N	GLFL	SK-S
CNW54	90	R	N	GLFL	S-M
CNW85	90	R	N	GLFL	S-M

(continued)

Table 18. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of deposition	PSD of lower soil material
CNWX5	90	R	N	GLFL	S-M
CSY	90	VP	VF	ORGA	ORGA
CSY5P	60	VP	VF	ORGA	ORGA
CSY8P	90	VP	VF	ORGA	ORGA
CYF	90	I	F	FLUV	FNL
DFN	90	VP	VF	ORGA	ORGA
DFN5P	60	VP	VF	ORGA	ORGA
DFN8P	90	VP	VF	ORGA	ORGA
DRT22	40	I	N	TILL	COL
DRT52	60	I	N	TILL	COL
DRT82	90	I	N	TILL	COL
ECY22	40	P	N	TILL	COL-G
ECY23	40	P	N	TILL	COL-G
ECY52	60	P	N	TILL	COL-G
ECY53	60	P	N	TILL	COL-G
ECY55	60	P	N	TILL	COL-G
ECY83	90	P	N	TILL	COL-G
FAC23	90	I	N	TILL	SK-L
FAC53	90	I	N	TILL	SK-L
FAC87	90	I	N	TILL	SK-L
FSH52	60	I	N	LACU	FNL
FSH54	60	I	N	LACU	FNL
FSH55	60	I	N	LACU	FNL
FSH80	60	I	N	LACU	FNL
FUH20	40	MW	N	TILL	FNL
FUH22	40	MW	N	TILL	FNL
FUH50	60	MW	N	TILL	FNL
FUH52	60	MW	N	TILL	FNL
FUH53	60	MW	N	TILL	FNL
FUH80	90	MW	N	TILL	FNL
GNH52	90	P	N	GLFL	S-F
GNH84	90	P	N	GLFL	S-F
GNHX2	90	P	N	GLFL	S-F
GPR	90	MW	N	MARI	COL
HBT22	90	R	N	GLFL	SK-S
HBT23	90	R	N	GLFL	SK-S
HBT52	90	W	N	GLFL	SK-S
HBT53	90	W	N	GLFL	SK-S
HBT54	90	R	N	GLFL	SK-S
HBT55	90	R	N	GLFL	SK-S
HBT86	90	R	N	GLFL	SK-S
HBT88	90	R	N	GLFL	SK-S
HBTX3	90	R	N	GLFL	SK-S
HBTX8	90	R	N	GLFL	SK-S
HFD22	40	MW	N	TILL	COL-G
HFD23	40	MW	N	TILL	COL-G

(continued)

Table 18. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of deposition	PSD of lower soil material
HFD50	60	MW	N	TILL	COL-G
HFD52	60	W	N	TILL	COL-G
HFD53	60	W	N	TILL	COL-G
HFD83	90	W	N	TILL	COL-G
HTP20	40	I	N	TILL	FNL-G
HTP21	40	I	N	TILL	FNL-G
HTP22	40	I	N	TILL	FNL-G
HTP23	40	I	N	TILL	FNL-G
HTP50	60	I	N	TILL	FNL-G
HTP51	60	I	N	TILL	FNL-G
HTP52	60	I	N	TILL	FNL-G
HTP53	60	I	N	TILL	FNL-G
KGP54	90	I	N	GLFL	S-M
KGP85	90	I	N	GLFL	S-M
KGPX5	90	I	N	GLFL	S-M
KSV20	40	P	N	TILL	FNL
KSV22	40	P	N	TILL	FNL
KSV52	60	P	N	TILL	FNL
LWR52	60	P	N	LACU	FNL
LWR54	60	P	N	LACU	FNL
LWR55	60	P	N	LACU	FNL
LWR80	60	P	N	LACU	FNL
MGA23	90	P	N	GLFL	SK-S
MGA52	90	P	N	GLFL	SK-S
MGA53	90	P	N	GLFL	SK-S
MGA83	90	P	N	GLFL	SK-S
MHO20	40	P	N	TILL	FNL-G
MHO21	40	P	N	TILL	FNL-G
MHO22	40	P	N	TILL	FNL-G
MHO23	40	P	N	TILL	FNL-G
MHO50	60	P	N	TILL	FNL-G
MHO51	60	P	N	TILL	FNL-G
MHO52	60	P	N	TILL	FNL-G
MHO53	60	P	N	TILL	FNL-G
MLL85	90	P	N	GLFL	S-M
MRW23	40	W	N	TILL	SK-L
MRW53	60	W	N	TILL	SK-L
MRW87	90	W	N	TILL	SK-L
MSW22	40	P	N	TILL	COL
MSW50	60	P	N	TILL	COL
MSW52	60	P	N	TILL	COL
MSW82	90	P	N	TILL	COL
NTV23	40	P	N	TILL	SK-L
NTV53	60	P	N	TILL	SK-L
NTV87	90	P	N	TILL	SK-L
OSW52	90	I	N	GLFL	S-F

(continued)

Table 18. Soil attributes used for interpretations (continued)

Soil	Potential rooting depth (cm)	Drainage	Flooding	Mode of deposition	PSD of lower soil material
OSW84	90	I	N	GLFL	S-F
OSWX2	90	I	N	GLFL	S-F
PGW22	40	MW	N	TILL	COL
PGW52	60	W	N	TILL	COL
PGW82	90	W	N	TILL	COL
QUE20	40	I	N	TILL	FNL
QUE22	40	I	N	TILL	FNL
QUE50	60	I	N	TILL	FNL
QUE52	60	I	N	TILL	FNL
QUE53	60	I	N	TILL	FNL
RGO5P	60	VP	VF	ORGA	ORGA
RGO8P	90	VP	VF	ORGA	ORGA
SGL22	40	I	N	TILL	COL-G
SGL23	40	I	N	TILL	COL-G
SGL52	60	I	N	TILL	COL-G
SGL53	60	I	N	TILL	COL-G
SGL83	90	I	N	TILL	COL-G
SHN21	40	W	N	TILL	ROCK
SHN23	40	W	N	TILL	ROCK
SHN27	40	W	N	TILL	ROCK
SHN50	60	W	N	TILL	ROCK
SHN51	60	W	N	TILL	ROCK
SHN53	60	W	N	TILL	ROCK
SHN57	60	W	N	TILL	ROCK
STW	90	P	VF	FLUV	FNL
TUO52	90	W	N	GLFL	S-F
TUO55	90	R	N	GLFL	S-F
TUO84	90	W	N	GLFL	S-F
TUOX2	90	W	N	GLFL	S-F
TUOX4	90	W	N	GLFL	S-F
VRN21	40	I	N	TILL	ROCK
VRN23	40	I	N	TILL	ROCK
VRN27	40	I	N	TILL	ROCK
VRN50	60	I	N	TILL	ROCK
VRN51	60	I	N	TILL	ROCK
VRN52	60	I	N	TILL	ROCK
VRN53	60	I	N	TILL	ROCK
VRN57	60	I	N	TILL	ROCK
WOB21	40	MW	N	TILL	FNL-G
WOB22	40	MW	N	TILL	FNL-G
WOB23	40	MW	N	TILL	FNL-G
WOB50	60	MW	N	TILL	FNL-G
WOB51	60	MW	N	TILL	FNL-G
WOB52	60	MW	N	TILL	FNL-G
WOB53	60	MW	N	TILL	FNL-G

Table 19. Soil map unit interpretations

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
BGE / B	Uc	Uc	Pc	Pc	Pc	Fcg	Pc	4IW
BGE =CHW / B	Uc =Ucg	Uc =Ucg	Pc =Uc	Pc =Uc	Pc =Uc	Fcg=Uc	Pc =Uc	4IW=5IW
CBR / B	Pc	Uc	Fc	Fcf	Fc	G	Fc	3I
CHW / B	Ucg	Ucg	Uc	Uc	Uc	Uc	Uc	5IW
CHW / C	Uc	Uc	Uc	Uc	Uc	Uc	Uc	5IW
CSY / B	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	Ucg	O
DRT22 / B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
DRT22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
DRT22 / E	Pa	Pa	Pf	Paf	Uf	Ff	Uf	4T
DRT22=DRT52/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
DRT22=HFD22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22=MSW22/ B	Pag=Ug	Pag=Ug	Fag=Pg	Pa =Pag	Fag=Pg	Fg =Pg	Fag=Pg	4W =5W
DRT22=MSW22/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Faf=Px	3D =4W
DRT22=PGW22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22=PGW22/ D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
DRT22=PGW52/ C	G =Pa	Fa =Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
DRT22=QUE22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22>MSW22/ B	Pag>Ug	Pag>Ug	Fag>Pg	Pa >Pag	Fag>Pg	Fg >Pg	Fag>Pg	4W >5W
DRT22>MSW22/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Faf>Px	3D >4W
DRT22>PGW22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22>PGW52/ C	Pa >G	Pa >Fa	Fa >G	Pa >G	Faf>Ff	G	Faf>Ff	3D >2C
DRT22>SGL22/ B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
DRT22>SGL22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
DRT22>SGL22/ D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
DRT52 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=HFD52/ C	G =Fg	Fa =Fag	G	G	Ff	G	Ff	2C
DRT52=MSW22/ B	Pg =Ug	Pg =Ug	Fg =Pg	Ffg=Pag	Fg =Pg	Fg =Pg	Fg =Pg	3W =5W
DRT52=PGW52/ B	Ff =Pg	Fa =Pg	G =Fg	Ff =Ffg	G =Fg	G =Fg	G =Fg	2C =3W
DRT52=PGW52/ C	G =Fg	Fa =Fag	G	G	Ff	G	Ff	2C
DRT52=PGW52/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
DRT52=QUE22/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
DRT52=QUE52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT52=QUE52/ D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
DRT52>MSW22/ C	Fg >Pag	Fag>Pag	G >Fag	G >Pa	Ff >Px	G >Fg	Ff >Px	2C >4W
DRT52>MSW52/ B	Pg >Ug	Pg >Ug	Fg >Pg	Ffg>Pg	Fg >Pg	Fg >Pg	Fg >Pg	3W >5W
DRT52>MSW52/ C	Fg >Pg	Fag>Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Ff >Ffg	2C >3W
DRT52>PGW52/ C	Fg >G	Fag>Fa	G	G	Ff	G	Ff	2C
DRT52>PGW52/ E	Ffg>Ff	Px >Faf	Pf	Pf	Uf	Ff	Uf	4T
DRT52>QUE22/ C	Fg >Pa	Fag>Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Faf	2C >3D
DRT52>SGL52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
DRT82 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
DRT82 / C	Fg	Fg	G	G	Ff	G	Ff	2C
DRT82 / D	Fg	Fg	Ff	Ff	Pf	G	Pf	3T
ECY22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
ECY22=SGL22/ B	Pag=Ug	Pag=Ug	Fag=Pg	Pa =Pag	Fag=Pg	Fg =Pg	Fag=Pg	4W =5W
ECY22=SGL22/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Faf=Px	3D =4W
ECY22=SGL52/ B	Pg =Ug	Pg =Ug	Fg =Pg	Ffg=Pag	Fg =Pg	Fg =Pg	Fg =Pg	3W =5W
ECY22>SGL22/ C	Pag>Pa	Pag>Pa	Fag>Fa	Pa	Px >Faf	Fg >G	Px >Faf	4W >3D
ECY53 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
FAC87 / C2	Ub	Fbg	Pb	Pb	Pb	Fbd	Pb	4G
FUH22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
FUH22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
FUH22=QUE22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
FUH22>HFD53/ C	Pa >G	Pa >Fa	Fa >G	Pa >G	Faf>Ff	G	Faf>Fbf	3D >2C
FUH52 / C	G	Fa	G	G	Ff	G	Ff	2C
FUH52 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T

(continued)

Table 19. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
FUH52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
FUH52=QUE22/ C	G =Pa	Fa =Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
FUH52>QUE52/ C	G >Fg	Fa >Fag	G	G	Ff	G	Ff	2C
HBT52 / C	G	G	G	G	Ff	G	Ff	2C
HFD22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
HFD22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
HFD22=SGL22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
HFD22>SGL53/ C	Pa >Fg	Pa >Fag	Fa >G	Pa >G	Faf>Ff	G	Faf>Fbf	3D >2C
HFD52 / C	G	Fa	G	G	Ff	G	Ff	2C
HFD52 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T
HFD52 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
HFD52=SGL52/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
HFD53 / C	G	Fa	G	G	Ff	G	Fbf	2C
HFD53 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T
HFD53 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
HFD53=PGW52/ C	G	Fa	G	G	Ff	G	Fbf=Ff	2C
HFD53=SGL53/ C	G =Fg	Fa =Fag	G	G	Ff	G	Fbf	2C
HFD53=SGL53/ D	G =Fg	Fa =Fag	Ff	Ff	Pf	G	Pf	3T
HFD53>SGL53/ C	G >Fg	Fa >Fag	G	G	Ff	G	Fbf	2C
HFD53>SGL53/ D	G >Fg	Fa >Fag	Ff	Ff	Pf	G	Pf	3T
KSV22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
KSV22 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
KSV22=QUE22/ C	Pa =Pag	Pa =Pag	Fa =Fag	Pa	Faf=Px	G =Fg	Faf=Px	3D =4W
KSV22>QUE22/ B	Ug >Pag	Ug >Pag	Pg >Fag	Pag>Pa	Pg >Fag	Pg >Fg	Pg >Fag	5W >4W
MSW22 / B	Ug	Ug	Pg	Pag	Pg	Pg	Pg	5W
MSW22 / C	Pag	Pag	Fag	Pa	Px	Fg	Px	4W
MSW22>DRT22/ B	Ug >Pag	Ug >Pag	Pg >Fag	Pag>Pa	Pg >Fag	Pg >Fg	Pg >Fag	5W >4W
MSW22>DRT22/ C	Pag>Pa	Pag>Pa	Fag>Fa	Pa	Px >Faf	Fg >G	Px >Faf	4W >3D
MSW52 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
MSW52 / C	Pg	Pg	Fg	Fg	Ffg	Fg	Ffg	3W
MSW82 / B	Ug	Ug	Pg	Pg	Pg	Pg	Pg	5W
PGW22 / B	Pa	Pa	Fa	Pa	Fa	G	Fa	3D
PGW22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
PGW22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
PGW22>DRT22/ C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
PGW22>DRT52/ C	Pa >Fg	Pa >Fag	Fa >G	Pa >G	Faf>Ff	G	Faf>Ff	3D >2C
PGW52 / B	Ff	Fa	G	Ff	G	G	G	2C
PGW52 / C	G	Fa	G	G	Ff	G	Ff	2C
PGW52 / D	G	Fa	Ff	Ff	Pf	G	Pf	3T
PGW52 / E	Ff	Faf	Pf	Pf	Uf	Ff	Uf	4T
PGW52 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
PGW52=SGL53/ C	G =Fg	Fa =Fag	G	G	Ff	G	Fbf=Ff	2C
PGW52>DRT22/ C	G >Pa	Fa >Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Faf	2C >3D
PGW52>DRT52/ C	G >Fg	Fa >Fag	G	G	Ff	G	Ff	2C
PGW52>DRT52/ D	G >Fg	Fa >Fag	Ff	Ff	Pf	G	Pf	3T
PGW52>FUH22/ C	G >Pa	Fa >Pa	G >Fa	G >Pa	Ff >Faf	G	Ff >Faf	2C >3D
PGW82 / B	Ff	G	G	Ff	G	G	G	2C
PGW82 / C	G	G	G	G	Ff	G	Ff	2C
PGW82 / D	G	G	Ff	Ff	Pf	G	Pf	3T
PGW82 / E	Ff	Ff	Pf	Pf	Uf	Ff	Uf	4T
PGW82>DRT52/ C	G >Fg	G >Fag	G	G	Ff	G	Ff	2C
QUE22 / B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
QUE22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
QUE22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT
QUE22=QUE52/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
QUE22>KSV22/ B	Pag>Ug	Pag>Ug	Fag>Pg	Pa >Pag	Fag>Pg	Fg >Pg	Fag>Pg	4W >5W
QUE22>KSV22/ C	Pa >Pag	Pa >Pag	Fa >Fag	Pa	Faf>Px	G >Fg	Faf>Px	3D >4W
QUE22>SGL52/ C	Pa >Fg	Pa >Fag	Fa >G	Pa >G	Faf>Ff	G	Faf>Ff	3D >2C

(continued)

Table 19. Soil map unit interpretations (continued)

Soil map unit	Alfalfa	Apples	Spring Cereals	Winter Cereals	Corn	Forage	Vegetables	CLI (Agr.)
QUE52 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
QUE52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
QUE52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
QUE52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
QUE52>DRT52/ C	Fg	Fag	G	G	Ff	G	Ff	2C
QUE52>KSV22/ C	Fg >Pag	Fag>Pag	G >Fag	G >Pa	Ff >Px	G >Fg	Ff >Px	2C >4W
SGL22 / B	Pag	Pag	Fag	Pa	Fag	Fg	Fag	4W
SGL22 / C	Pa	Pa	Fa	Pa	Faf	G	Faf	3D
SGL22 / D	Pa	Pa	Faf	Pa	Pf	G	Pf	3DT&a6H
SGL22=SGL52/ C	Fg =Pa	Fag=Pa	G =Fa	G =Pa	Faf=Ff	G	Faf=Ff	2C =3D
SGL52 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fg	3W
SGL52 / C	Fg	Fag	G	G	Ff	G	Ff	2C
SGL52 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
SGL52 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
SGL53 / B	Pg	Pg	Fg	Ffg	Fg	Fg	Fbg	3W
SGL53 / C	Fg	Fag	G	G	Ff	G	Fbf	2C
SGL53 / D	Fg	Fag	Ff	Ff	Pf	G	Pf	3T
SGL53 / E	Ffg	Px	Pf	Pf	Uf	Ff	Uf	4T
SGL53 / F	Pf	Pf	Uf	Uf	Uf	Pf	Uf	5T
SGL53>ECY53/ C	Fg >Pg	Fag>Pg	G >Fg	G >Fg	Ff >Ffg	G >Fg	Fbf>Px	2C >3W
SGL53>PGW82/ C	Fg >G	Fag>G	G	G	Ff	G	Fbf>Ff	2C
SGL53>PGW82/ D	Fg >G	Fag>G	Ff	Ff	Pf	G	Pf	3T
STW / B	Ucg	Ucg	Uc	Uc	Uc	Uc	Uc	5IW
ZCB	*	*	*	*	*	*	*	*
ZGP	*	*	*	*	*	*	*	*
ZGY	*	*	*	*	*	*	*	*
ZNS	*	*	*	*	*	*	*	*
ZRC	*	*	*	*	*	*	*	*
ZSM	*	*	*	*	*	*	*	*
ZUL	*	*	*	*	*	*	*	*
ZZZ	*	*	*	*	*	*	*	*

* interpretation not applicable

REFERENCES

Canada Department of Forestry and Rural Developement. 1967. Soil Capability Classification for Agriculture. ARDA Publication. Truro-11E.

Day, J.H. (ed.) 1982. The Canada Soil Information System (CanSIS). Manual For Describing Soils in the Field. Expert Commitee on Soil Survey. Land Resource Research Institute, Research Branch, Agriculture Canada, Ottawa.

Department of the Environment. 1972. The Canada Land Inventory. Soil Capability Classification for Agriculture. Agriculture Canada, Rep. No. 2. 16 pp.

Dzikowski, P. 1984. Nova Scotia agroclimatic atlas. Soils and Crops Branch, Nova Scotia Department of Agriculture and Marketing.

Goldthwait, J.W. 1924. Physiography of Nova Scotia. Geological Survey of Canada, Memoir 140.

Holmstrom, D.A. 1986. Soils of the Sussex area of New Brunswick. New Brunswick Soil Survey. Report No. 10 Research Branch Agriculture Canada. 151 pp.

Keppie, J.D. 1979. Plate tectonic interpretation of paleozoic world maps. Nova Scotia Department of Mines, Paper 77-3, 45 pp.

Loucks, O.L. 1961. A forest classification for the Maritime Provinces. Nova Scotia Institute of Science. Vol. 25 Part 2.

MacMillan, J.K. 1983. Soil limitations for growing timothy. New Brunswick Department of Agriculture. Unpublished mimeo.

Michalica, K. 1983. Soil suitability for apple orchards. N.B. Dept. Agr. Unpublished mimeo.

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

Nowland, J.L.; MacDougall, J.I. 1973. Soils of Cumberland County, Nova Scotia Rep. No. 17, Nova Scotia Soil Survey. 133 pp.

Nova Scotia Department of Municipal Affairs. 1979. Agricultural land use survey. Community Planning Division. Halifax.

Roland, A.E. 1982. Geological background and physiography of Nova Scotia. Nova Scotia Institute of Science. Ford Publ. Co. Halifax. 311 pp.

Wang, C. 1982. Application of transect method to soil survey problems. Land Resource Research Institute Contrib. No. 82-02, Research Branch, Agriculture Canada, Ottawa, Ont.

Wang, C.; Rees, H.W. 1983. Soils of the Rogersville - Richibucto region of New Brunswick. New Brunswick Soil Survey Report No. 9. Research Branch, Agriculture Canada and New Brunswick Department of Agriculture and Rural Development. 239 pp.

Wang, C.; McKeague, J.A.; Topp, G.C. 1985. Comparison of estimated and measured horizontal Ksat values. Can. J. Soil Sci. 65:707-715.

Wicklund, R.E.; Smith, G.R. 1948. Soil survey of Colchester County, Nova Scotia Rep. No. 3. Nova Scotia Soil Survey, Nova Scotia Department of Agriculture, Dominion Department of Agriculture, and Nova Scotia Agricultural College.

Webb, K.T.; Thompson, R.L.; Beke, G.J.; Nowland, J.L. (in preparation). Soils of Colchester County, Nova Scotia. Report 19. Nova Scotia Soil Survey. Land Resource Research Centre, Research Branch, Agriculture Canada.

Webb, K.T. (in preparation). Soils of Pictou County, Nova Scotia. Report 18. Nova Scotia Soil Survey. Land Resource Research Centre, Research Branch, Agriculture Canada.

SOIL OR LANDTYPE SYMBOL	SOIL OR LANDTYPE NAME	DRAINAGE	LOWER SOIL MATERIAL
BGE	Bridgeville	Imperfect	Friable coarse loamy to loose sandy-gravelly alluvium
CBR	Cumberland	Well drained	Friable coarse loamy to loose sandy-gravelly alluvium
CHW	Chaswood	Poor	Friable coarse loamy to loose sandy-gravelly alluvium
CSY	Castley	Very poor	Fibric to mesic sphagnum bog peat
DRT	Debert	Imperfect	Friable to firm coarse loamy till
ECY	Economy	Poor	Friable to firm coarse loamy-gravelly till
FAC	Factorydale	Imperfect	Friable loamy-skeletal till
FUH	Falmouth	Moderately well drained	Firm fine loamy till
HBT	Hebert	Rapid to well drained	Loose sandy-gravelly to sandy-skeletal glacio-fluvial sediments
HFD	Hansford	Well to moderately well drained	Friable to firm coarse loamy-gravelly till
KSV	Kingsville	Poor	Firm fine loamy till
MSW	Masstown	Poor	Friable to firm coarse loamy till
PGW	Pugwash	Well to moderately well drained	Friable to firm coarse loamy till
QUE	Queens	Imperfect	Firm fine loamy till
SGL	Springhill	Imperfect	Friable to firm coarse loamy-gravelly till
STW	Stewiacke	Poor	Friable to firm fine loamy alluvium
ZCB	Coastal Beach		
ZGP	Gravel Pit		
ZGY	Gully		
ZNS	Not Surveyed		
ZRC	River Course		
ZSM	Salt Marsh		
ZUL	Urban Land		

PARTICLE SIZE TERMS

Gravelly .... 20-35% coarse fragments (greater than 2 mm) by volume.
Skeletal .... more than 35% coarse fragments by volume.
Fine loamy .... 18-35% clay.
Coarse loamy .... less than 18% clay (not sandy).
Sandy .... contains more than 70% sand and the % silt plus twice the % clay does not exceed 30. More than 25% very coarse, coarse and medium sand.
Fine sandy .... 50% or more fine sand, or less than 25% very coarse, coarse, and medium sand and less than 50% very fine sand.

MAP SYMBOL EXPLANATION

SIMPLE MAP UNIT

$$\frac{\text{HFD53}}{\text{1E2}}$$

- HFD — Soil or Landtype Symbol
- 5 — Depth Class of Upper Soil Material
- 3 — Particle Size Class of Upper Soil Material
- 1 — Rockiness Class
- E — Slope Class
- 2 — Stoniness Class

COMPOUND MAP UNITS

$$\frac{\text{HFD53=SGL23}}{\text{1E2}}$$ soils are equal

$$\frac{\text{HFD53>SGL23}}{\text{1E2}}$$ first soil is dominant (70%) second soil is significant (30%).

DEPTH CLASSES

Code	Depth Range (cm)
2	20 - 50
5	50 - 80
8	Greater than 80
X	Upper soil has cemented layers

SLOPE CLASSES

Code	% Slope
B	0-2
C	2-5
D	5-9
E	9-15
F	15-30

PARTICLE SIZE CLASSES

Code	Class
0	Fine loamy
1	Fine loamy-gravelly
2	Coarse loamy
3	Coarse loamy-gravelly
4	Fine sandy
5	Sandy
6	Sandy-gravelly
7	Loamy-skeletal
8	Sandy-skeletal
P	Peat

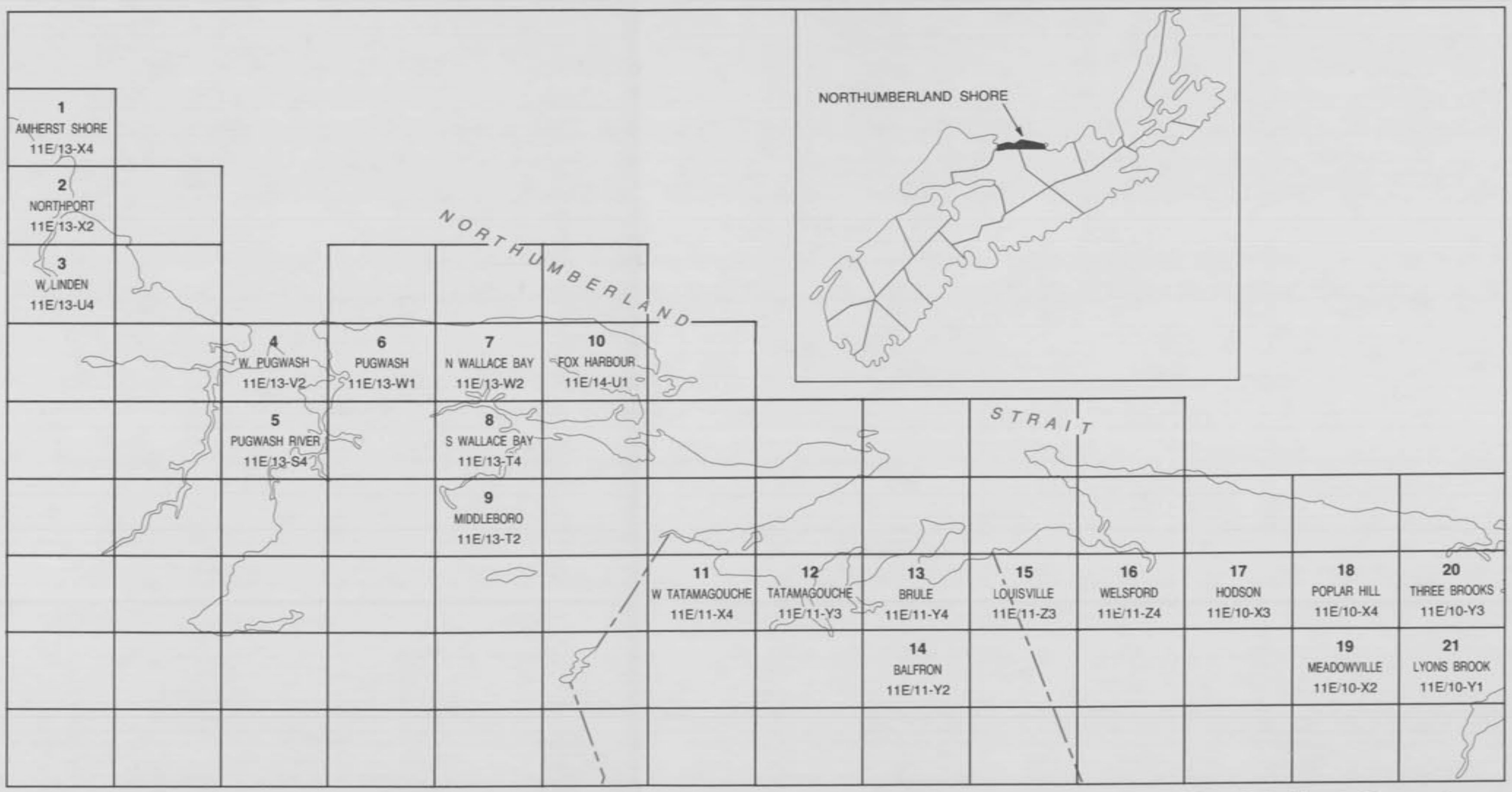
ROCKINESS CLASSES
(bedrock exposures)

Code	Class name	% Coverage
-	Non rocky	Less than 2
1	Slightly rocky	2-10
2	Moderately rocky	10-25

STONINESS CLASSES
(greater than 25 cm in diameter)

Code	Class Name	% Coverage
-	Non to slightly stony	Less than 0.1
2	Moderately stony	0.1-3

INDEX TO MAP SHEETS
NORTHUMBERLAND SHORE PROJECT AREA
NOVA SCOTIA



Prepared by the Information Systems and Cartography Unit, Land Resource Research Centre, Agriculture Canada, 1988.

11E/13-X4 AMHERST SHORE

ADJOINS PAGE 2

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1:20,000
Metres 0 500 1000 1500 Metres

ADJOINS PAGE 1

ADJOINS PAGE 3

1:20,000

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1:20,000

Metres 0 500 1000 1500 Metres

11E/13-U4 WEST LINDEN

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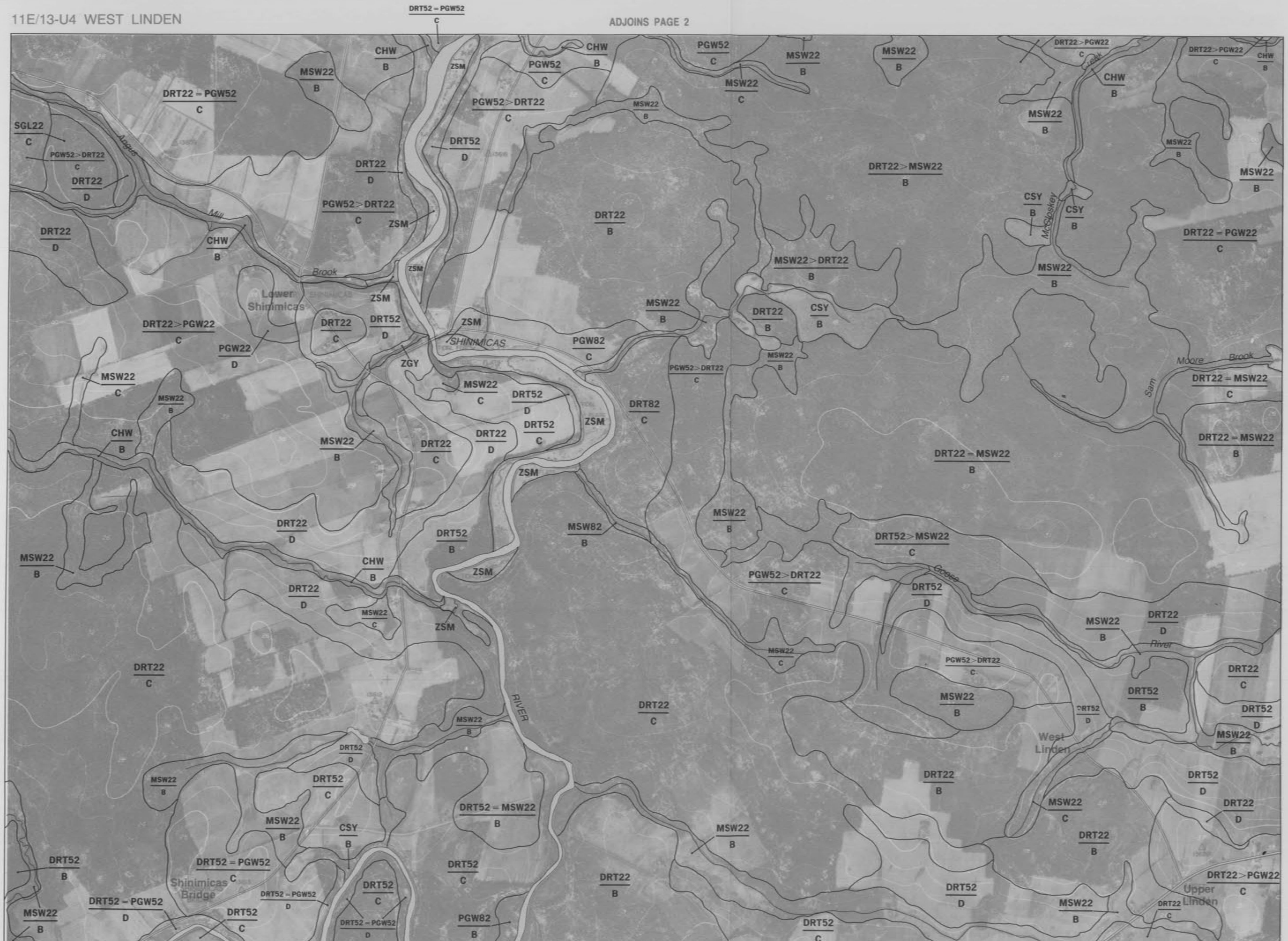

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ADJOINS PAGE 5

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Metres 0 500 1000 1500 Metres

ADJOINS PAGE 4

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

ADJOINS PAGE 4

ADJOINS PAGE 7

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

11E/13-W2 NORTH WALLACE BAY

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

ADJOINS PAGE 7

ADJOINS PAGE 9

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

ADJOINS PAGE 8

1:20,000

Miles 0 ¼ ½ 1 Miles

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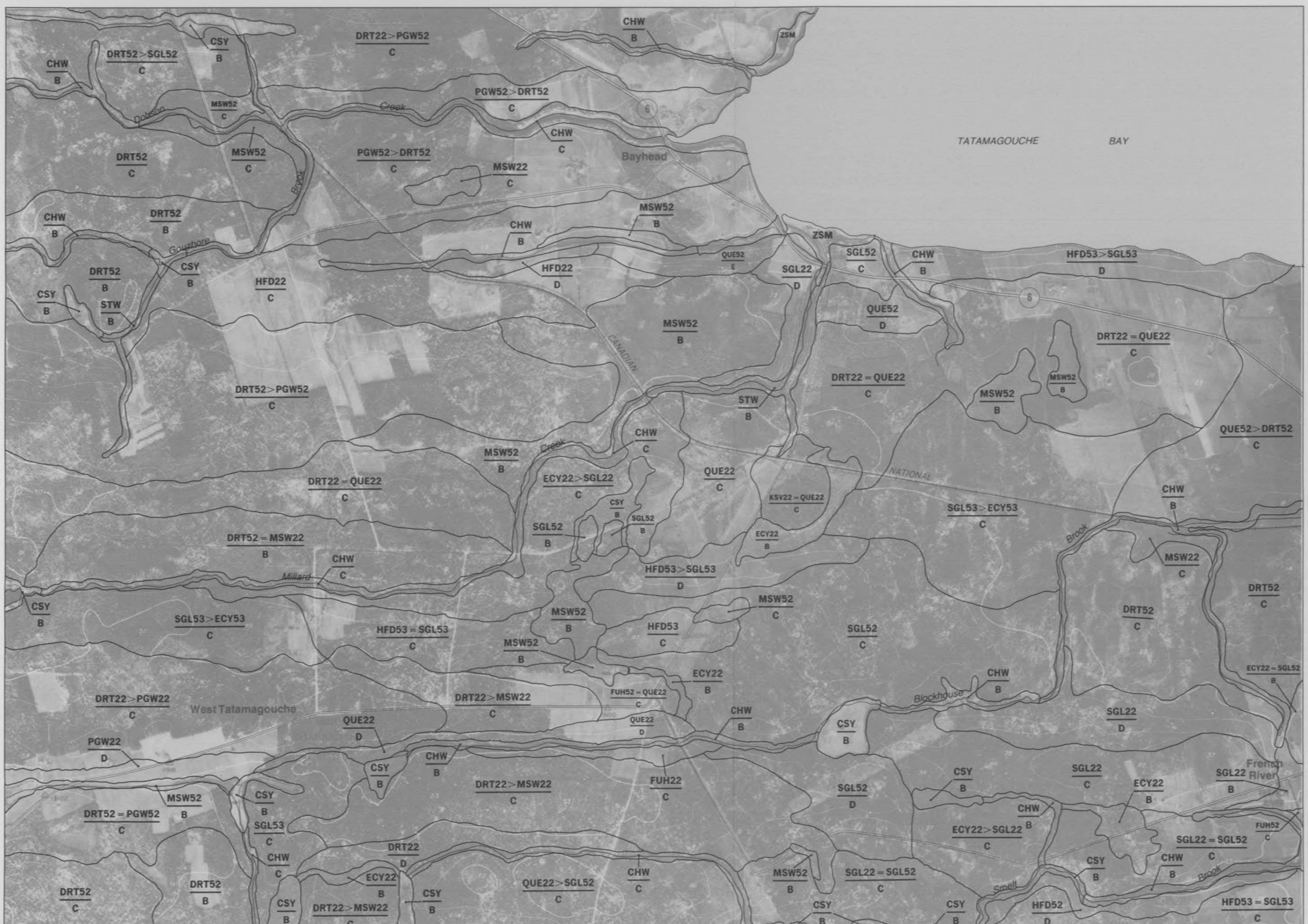
Metres 0 500 1000 1500 Metres

11E/14-U1 FOX HARBOUR

ADJOINS PAGE 7

11E/11-X4 WEST TATAMAGOUCHE



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ADJOINS PAGE 11

ADJOINS PAGE 13

1:20,000
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1:20,000
Metres 0 500 1000 1500 Metres

11E/11-Y4 BRULE

ADJOINS PAGE 12

ADJOINS PAGE 15

ADJOINS PAGE 14

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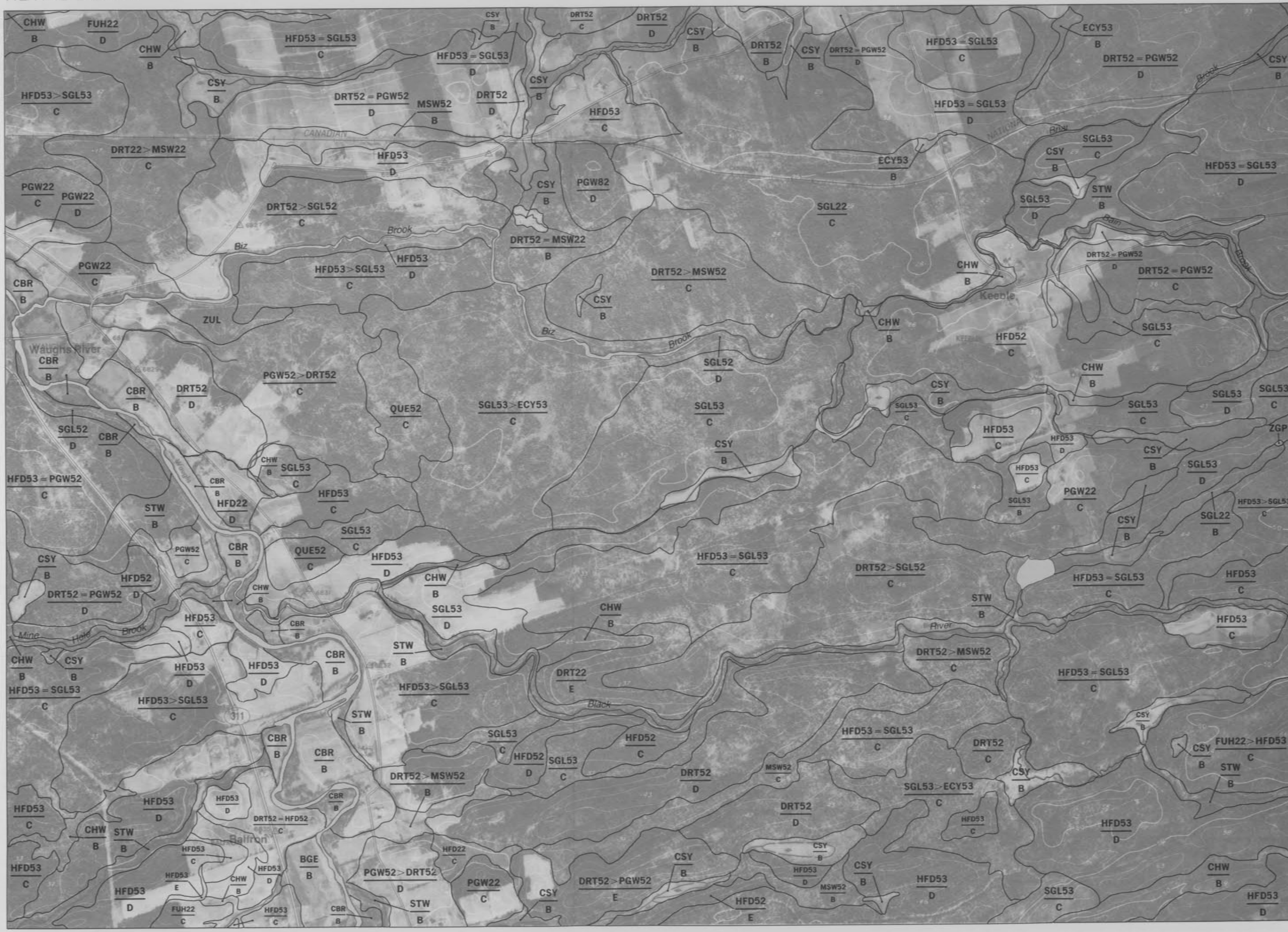
ADJOINS PAGE 13



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11E/11-Z3 LOUISVILLE

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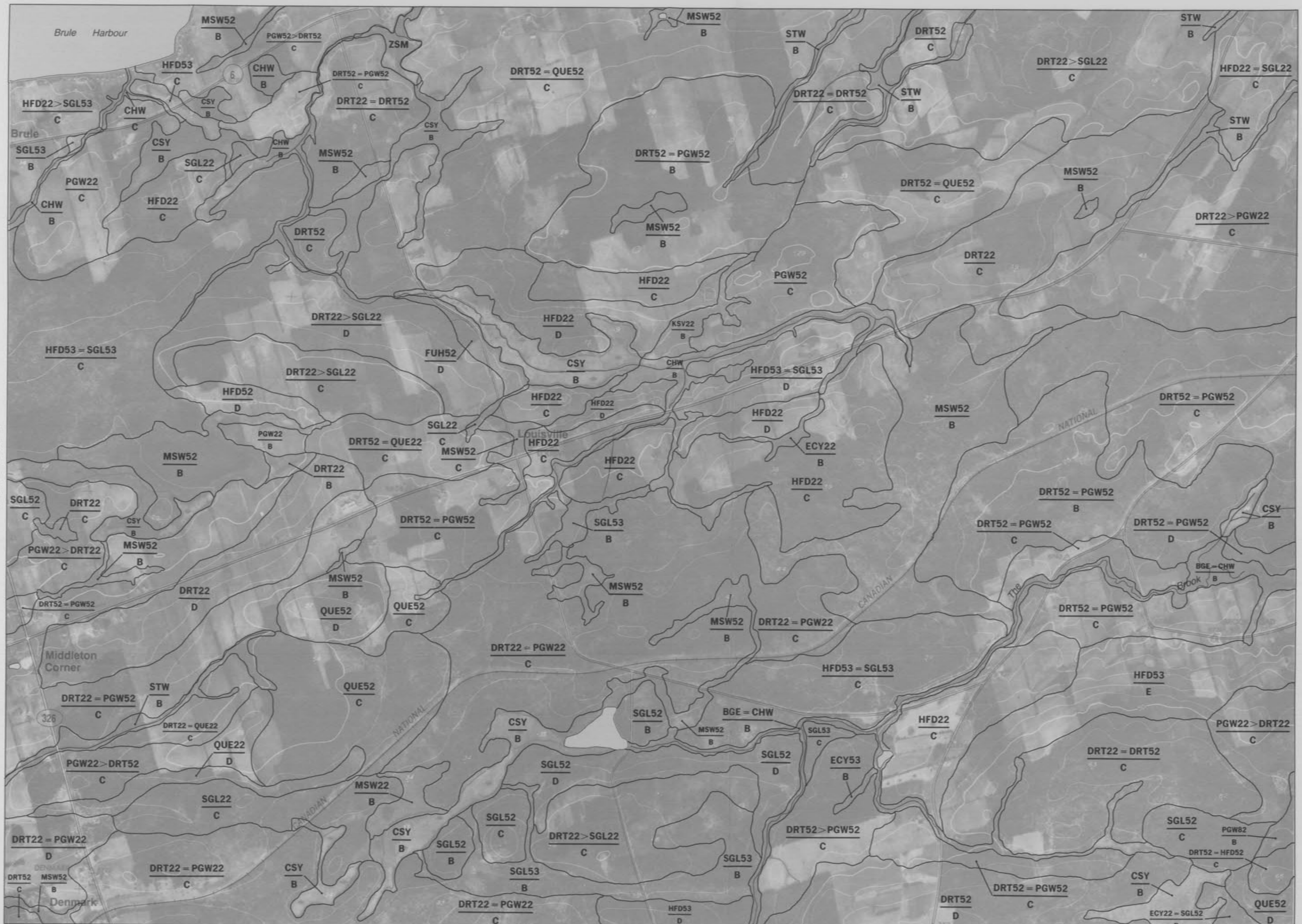

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11E/11-Z4 WELSFORD

ADJOINS PAGE 15

ADJOINS PAGE 17

1:20,000

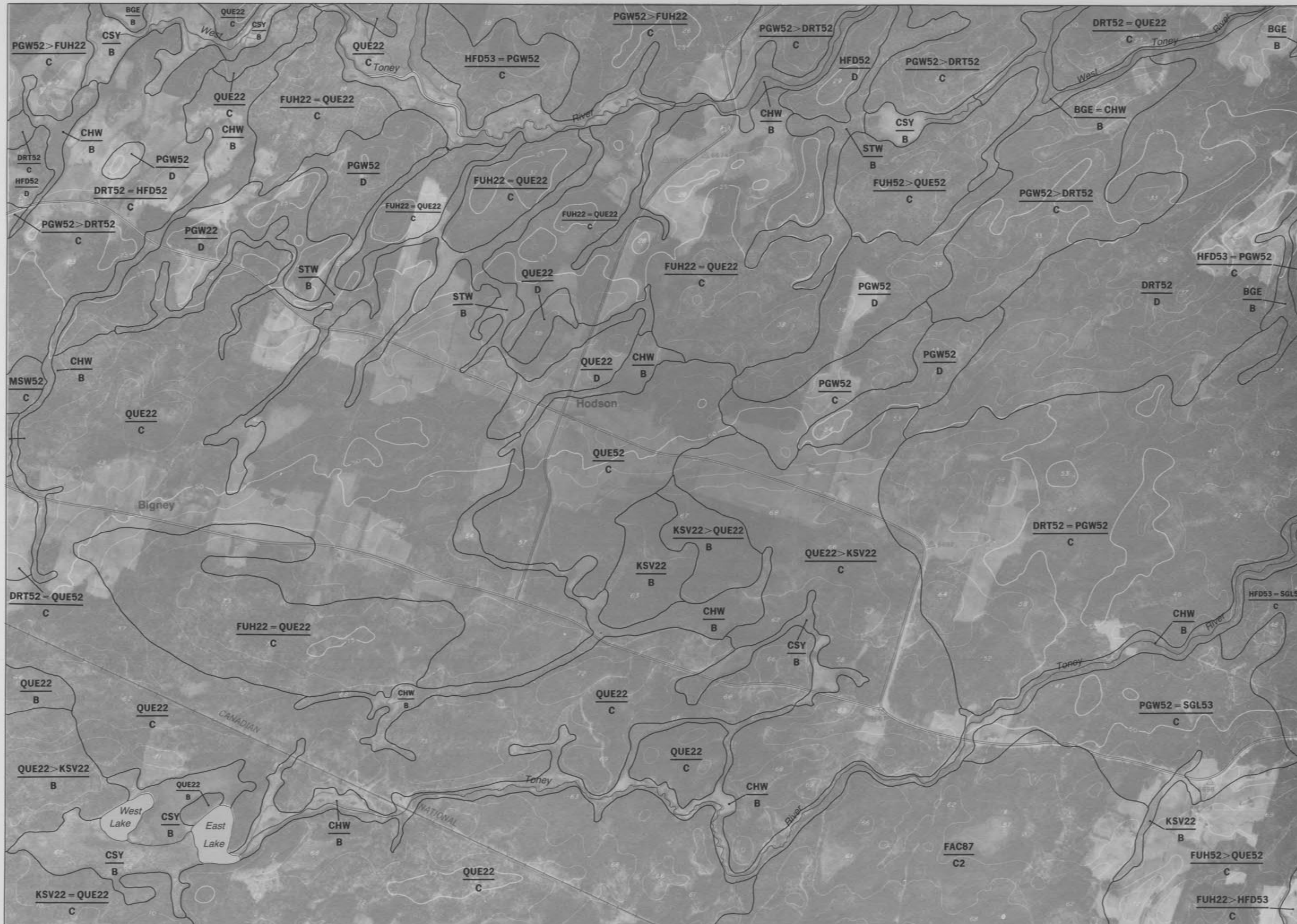
Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

11E/10-X3 HODSON

ADJOINS PAGE 16



ADJOINS PAGE 18

1:20,000

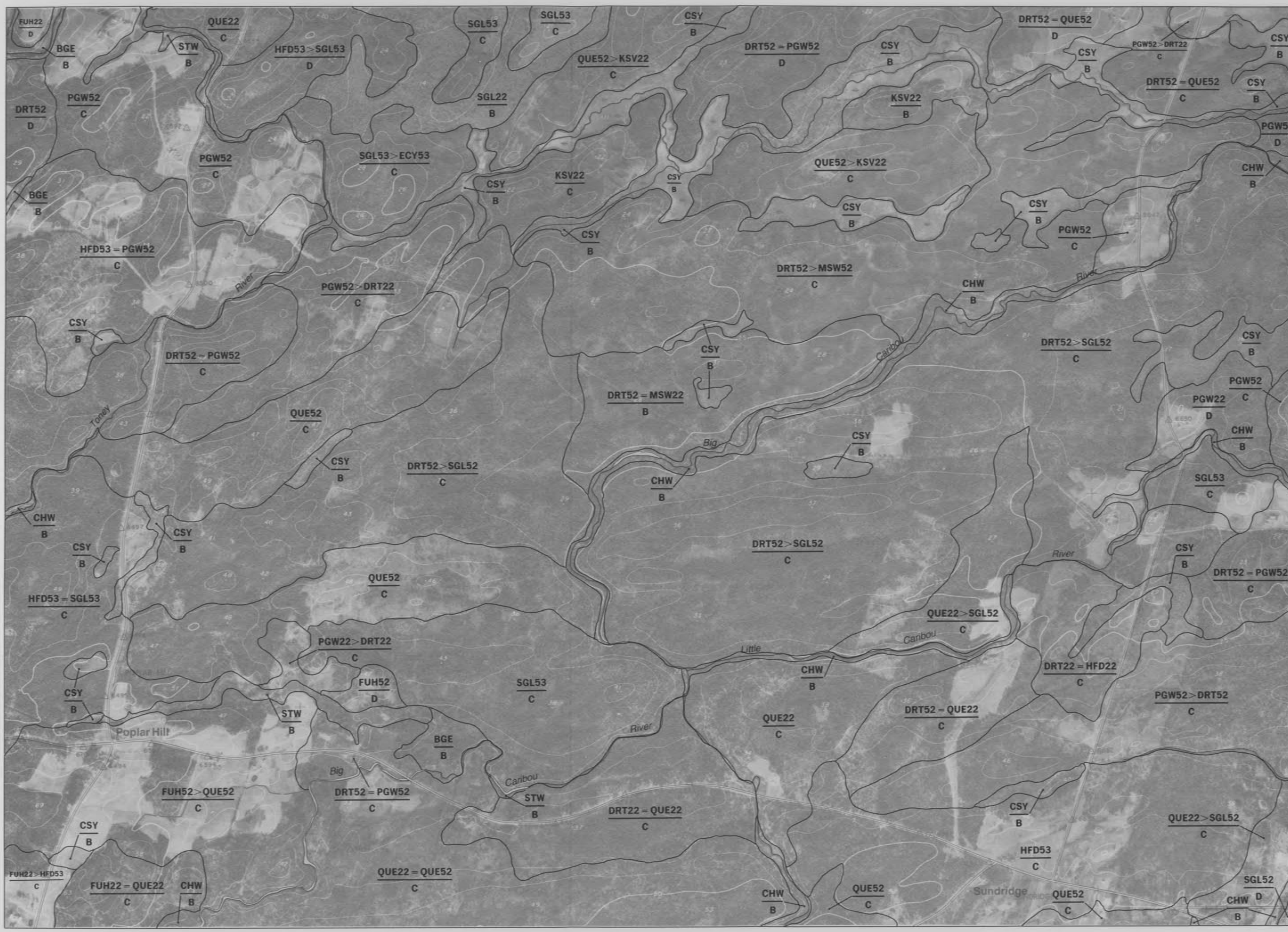
Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

11E/10-X4 POPLAR HILL

ADJOINS PAGE 17



ADJOINS PAGE 20

ADJOINS PAGE 19

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

ADJOINS PAGE 18

ADJOINS PAGE 21

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

11E/10-Y3 THREE BROOKS

1:20,000

Miles 0 ¼ ½ 1 Miles

1:20,000

Metres 0 500 1000 1500 Metres

ADJOINS PAGE 20
ADJOINS PAGE 19

1:20,000
Miles 0 ¼ ½ 1 Miles

1:20,000
Metres 0 500 1000 1500 Metres

SOIL OR LANDTYPE SYMBOL	SOIL OR LANDTYPE NAME	DRAINAGE	LOWER SOIL MATERIAL
BGE	Bridgeville	Imperfect	Friable coarse loamy to loose sandy-gravelly alluvium
CBR	Cumberland	Well drained	Friable coarse loamy to loose sandy-gravelly alluvium
CHW	Chaswood	Poor	Friable coarse loamy to loose sandy-gravelly alluvium
CSY	Castley	Very poor	Fibric to mesic sphagnum bog peat
DRT	Debert	Imperfect	Friable to firm coarse loamy till
ECY	Economy	Poor	Friable to firm coarse loamy-gravelly till
FAC	Factorydale	Imperfect	Friable loamy-skeletal till
FUH	Falmouth	Moderately well drained	Firm fine loamy till
HBT	Hebert	Rapid to well drained	Loose sandy-gravelly to sandy-skeletal glacio-fluvial sediments
HFD	Hansford	Well to moderately well drained	Friable to firm coarse loamy-gravelly till
KSV	Kingsville	Poor	Firm fine loamy till
MSW	Masstown	Poor	Friable to firm coarse loamy till
PGW	Pugwash	Well to moderately well drained	Friable to firm coarse loamy till
QUE	Queens	Imperfect	Firm fine loamy till
SGL	Springhill	Imperfect	Friable to firm coarse loamy-gravelly till
STW	Stewiacke	Poor	Friable to firm fine loamy alluvium
ZCB	Coastal Beach		
ZGP	Gravel Pit		
ZGY	Gully		
ZNS	Not Surveyed		
ZRC	River Course		
ZSM	Salt Marsh		
ZUL	Urban Land		

PARTICLE SIZE TERMS

Gravelly .... 20-35% coarse fragments (greater than 2 mm) by volume.
Skeletal .... more than 35% coarse fragments by volume.
Fine loamy .... 18-35% clay.
Coarse loamy .... less than 18% clay (not sandy).
Sandy .... contains more than 70% sand and the % silt plus twice the % clay does not exceed 30. More than 25% very coarse, coarse and medium sand.
Fine sandy .... 50% or more fine sand, or less than 25% very coarse, coarse, and medium sand and less than 50% very fine sand.

MAP SYMBOL EXPLANATION

SIMPLE MAP UNIT

Depth Class of Upper Soil Material
Soil or Landtype Symbol —— HFD53 —— Particle Size Class of Upper Soil Material
Rockiness Class —— 1E2 —— Stoniness Class
Slope Class

COMPOUND MAP UNITS

$\frac{\text{HFD53=SGL23}}{\text{1E2}}$ soils are equal

$\frac{\text{HFD53>SGL23}}{\text{1E2}}$ first soil is dominant (70%) second soil is significant (30%).

DEPTH CLASSES

Code	Depth Range (cm)
2	20 - 50
5	50 - 80
8	Greater than 80
X	Upper soil has cemented layers

SLOPE CLASSES

Code	% Slope
B	0-2
C	2-5
D	5-9
E	9-15
F	15-30

PARTICLE SIZE CLASSES

Code	Class
0	Fine loamy
1	Fine loamy-gravelly
2	Coarse loamy
3	Coarse loamy-gravelly
4	Fine sandy
5	Sandy
6	Sandy-gravelly
7	Loamy-skeletal
8	Sandy-skeletal
P	Peat

ROCKINESS CLASSES (bedrock exposures)

Code	Class name	% Coverage
-	Non rocky	Less than 2
1	Slightly rocky	2-10
2	Moderately rocky	10-25

STONINESS CLASSES (greater than 25 cm in diameter)

Code	Class Name	% Coverage
-	Non to slightly stony	Less than 0.1
2	Moderately stony	0.1-3