GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

LEGEND

QUATERNARY

Cb — *COLLUVIAL SEDIMENTS: blanket deposits of silt, sand, rubble (angular pebble- through boulder-sized clasts), including minor till and gravel; generally 0.5 to 1.5 m thick, mainly materials derived from subaerial weathering processes but includes minor deposits relating to glaciation(s) of unknown age*

HOLOCENE

MARINE SEDIMENTS: sand, gravel, silt, clay; minor peat and organic sediment; deposited in beach and intertidal environments at or near present sea level

Wr — *Beaches, bars and spits: gravel, sand; minor silt; generally more than 1 m thick*

Wp — *Intertidal plains and salt marshes: clay, silt, some fine sand, minor peat and organic sediment; generally more than 2 m thick*

Ap — *ALLUVIAL SEDIMENTS: terraces and floodplains: sand, gravel, some silt, minor clay and organic sediment; generally more than 2 m thick; deposited as channel, overbank, and floodbasin deposits at or near present base level*

Op — *ORGANIC SEDIMENTS: bogs, fens, swamps: peat, muck, minor silt and fine sand; generally 1 to 5 m thick; deposited in shallow basins and on poorly drained surfaces*

LATE WISCONSINAN AND/OR EARLY HOLOCENE

LACUSTRINE SEDIMENTS: sand, silt, gravel, and clay deposited in shallow lake basins which were in part formed by retreating Late Wisconsinan ice

Lb — *Blankets and plains: sand, silt, minor clay and gravel, patchy thin veneer of organic sediment; generally 0.5 to 3 m thick*

Veneer: sand, some gravel and silt, rare clay; patchy thin veneer of organic sediment; discontinuous, generally less than 0.5 m thick

MARINE SEDIMENTS: sand, silt, gravel, and clay; deposited in shallow marine water, locally deep - which submerged coastal areas and sections of many valleys during and following Late Wisconsinan deglaciation

Wb — *Blankets and plains: sand, silt, some gravel and clay; generally 0.5 to 3 m thick*

Veneer: sand, some gravel and silt, rare clay; discontinuous, generally less than 0.5 m thick

LACUSTRINE AND MARINE SEDIMENTS: undifferentiated

L,Wb — *Blankets and plains: sand, silt, minor clay, and gravel, patchy thin veneer of organic sediment; generally 1 to 10 m thick*

Veneer: sand, some gravel and silt, rare clay, patchy thin veneer of organic sediment; discontinuous, generally less than 0.5 m thick

LATE WISCONSINAN

GLACIOFLUVIAL SEDIMENTS: sand, gravel, minor silt and till; deposited in front of, at the margin of, within or under retreating Late Wisconsinan ice

Outwash: sand, gravel, minor silt
Gp — *G p - plains and valley trains, generally thicker than 1.5 m*
Gd — *G d - deltas, generally thicker than 5 m*

Gx — *Ice-contact deposits: eskers, kames, kame and kettle complexes; sand, gravel, minor silt and till, generally more than 2 m thick*

MORAINAL SEDIMENTS: lodgment till, ablation till, and associated sand and gravel deposited directly by Late Wisconsinan ice or with minor reworking by water

Mm — *Hummocky, ribbed, and rolling ablation moraines: loamy ablation till, some lodgment till, minor silt, sand, gravel, and boulders; generally greater than 1.5 m thick*
aMm - mainly stony till (more than 35% of clasts pebble-sized and larger);
bMm - mainly bouldery till (more than 25% of clasts boulder-sized)

Mb, Mv — *Blanket and veneer: loamy lodgment till, minor ablation till, silt, sand, gravel, rubble*
Mb - blanket; generally 0.5 to 3 m thick
Mv - discontinuous veneer over rock, less than 0.5 m thick
bMb, bMv - mainly sandy till (sand content greater than 50%)
aMb, aMv - mainly stony till (more than 35% of clasts pebble-sized and larger)
bMb, bMv - mainly bouldery till (more than 25% of clasts boulder-sized)

WISCONSINAN

GLACIOFLUVIAL SEDIMENTS: sand, gravel, minor silt and till; deposited in front of, at the margin of, within and under ice of Wisconsinan age

Outwash: sand, gravel, minor silt
Gp — *G p - plains and valley trains, generally more than 1.5 m thick;*
Gd — *deltas; generally more than 5 m thick*

Gx — *Ice-contact deposits: eskers, kames, kame and kettle complexes; sand, gravel,minor silt; generally more than 2 m thick.*

MORAINAL SEDIMENTS: lodgment till, ablation till, and associated gravel and sand deposited directly by Wisconsinan ice or with minor reworking by water

Mm — *Rolling and ribbed ablation moraines: loamy ablation till, some lodgment till, minor silt, sand, gravel, and boulders; generally greater than 1.5 m thick*
aMm - mainly stony till (more than 35% of clasts pebble-sized and larger)

Mb, Mv — *Blanket and veneer: loamy lodgment till, minor ablation till, silt, sand, gravel, rubble*
Mb - blanket, generally 0.5 to 3 m thick
Mv - discontinuous veneer over rock, less than 0.5 m thick,
aMb,aMv - mainly stony till (more than 35% of clasts pebble-sized and larger)

WISCONSINAN AND/OR PRE-WISCONSINAN

Gx — *GLACIOFLUVIAL SEDIMENTS, ice-contact: eskers, kames, kame and kettle complexes: sand, gravel, minor silt, and till; generally more than 2 m thick; deposited at the margin of, within and under ice of unknown age*

Mm — *MORAINAL SEDIMENTS: rolling and ribbed ablation moraines: stony ablation till, some lodgment till, minor silt, sand, and gravel, more than 35% of clasts pebble-sized and larger; generally greater than 1.5 m thick; deposited directly by ice of unknown age or with minor reworking by water*

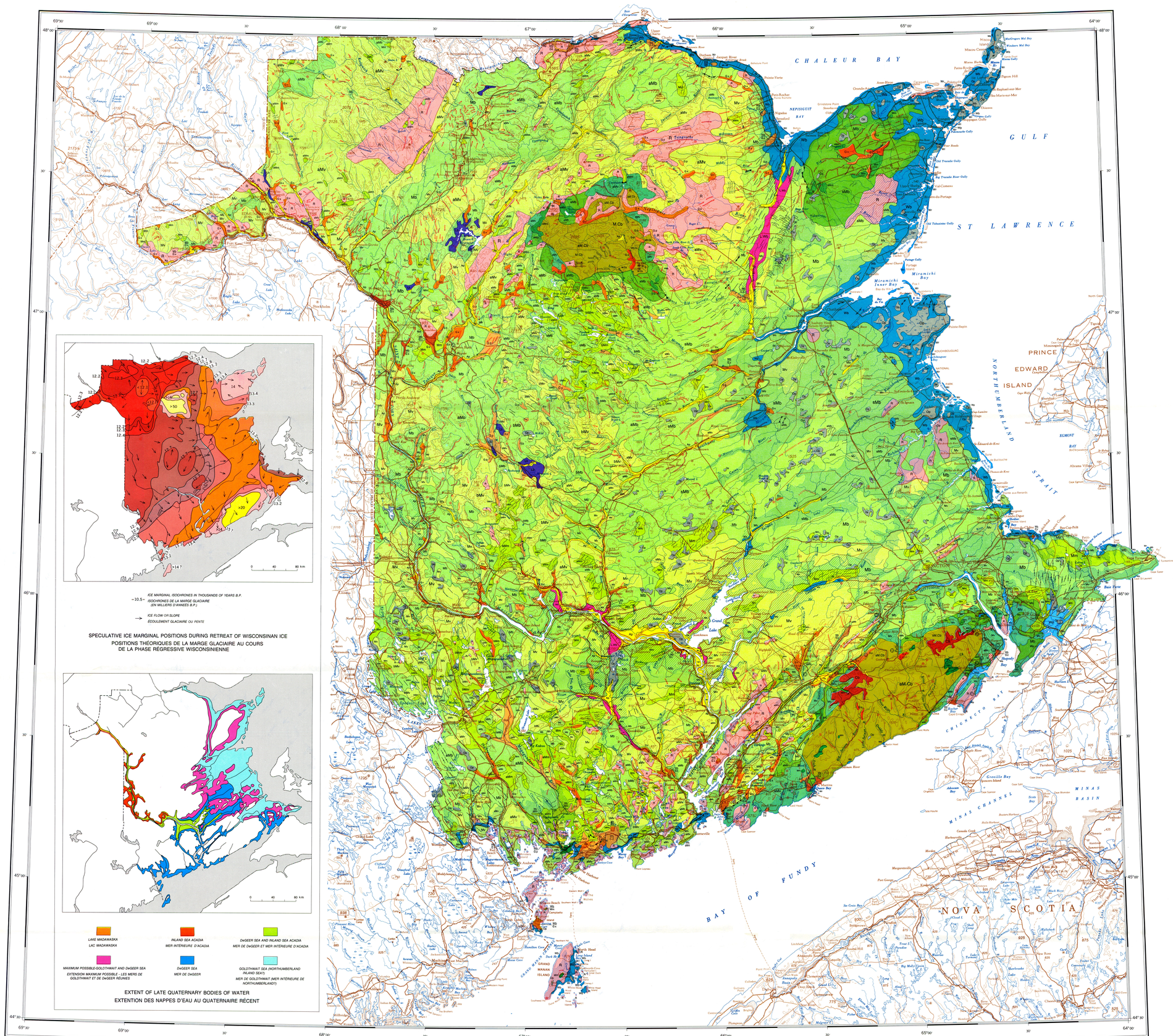
M,Cb — *MORAINAL AND COLLUVIAL SEDIMENTS: loamy till and colluvium, regolith and weathered bedrock, and isolated boulder fields, undifferentiated; mixture of deposits formed directly from ice of unknown age and materials produced by weathering processes; generally greater than 1 m thick*
aM,Cb - mainly stony deposits (more than 35% of clasts pebble-sized and larger)
bM,Cb - mainly sandy deposits (sand content greater than 5%)

PRE-QUATERNARY

R — *Rock: various lithologies and ages; generally weathered and partially disintegrated, glacially moulded surface; few localities show glacially scoured and polished surfaces*

Note: Lb, Wb, L, Wb or Mb *overlying another Quaternary unit (e.g.* Wb, Mb / Gp Gx *)*

Geological boundary
Fluted bedrock and drumlinoid ridges
Drumlins
Striae (direction known, unknown, relative age - 1 oldest) printed on reverse side
Moraine ridge (major, minor)
DeGeer moraine
Esker (direction of flow known, unknown)
Kame or isolated glaciofluvial deposit
Meltwater channel (direction of flown known, unknown)
Beach ridges
Delta
Sand dunes
Nivation terraces
Tor
Sink hole


C H A L E U R B A Y
G U L F
S T L A W R E N C E
N E P I S I G U I T B A Y
C H I G N E C T O B A Y
P R I N C E E D W A R D I S L A N D
N O R T H U M B E R L A N D S T R A I T
M I N A S B A S I N
M I N A S C H A N N E L
B A Y O F F U N D Y
N O V A S C O T I A
Miramichi Inner Bay
Miramichi Bay
Tracadie Bay
Richibucto Bay
Shediac Bay
Cocagne Bay
Buctouche Bay
Kouchibouguac National Park
Kouchibouguac
Kouchibouguac Bay
Grand Lake
Belleisle Bay
Kennebecasis Bay
Saint John
Fundy National Park
Alma
Hopewell Cape
Moncton
Dorchester
Sackville
Amherst
Pictou
New Glasgow
Truro
Antigonish
Sydney
Port Hawkesbury
Bras d'Or Lake
Baie Verte
Tabusintac
Neguac
Escuminac
Miscou Island
Caraquet
Bathurst
Dalhousie
Campbellton
Edmundston
Grand Falls
Perth-Andover
Woodstock
Fredericton
Oromocto
Moncton
Saint John
Halifax
Yarmouth
Charlottetown
Summerside
Montague
Souris
Georgetown
Souris
Cape Breton Island
Prince Edward Island
Grand Manan Island
Campobello Island
Deer Island
Long Island
Campobello Island
Eastport
Lubec
Calais
Machias
Bangor
Portland
Boston
Concord
Montpelier
Augusta
Quebec
Rimouski
Matane
Gaspe
Chandler
Mont-Joli
Saint-Jean
Chicoutimi
Roberval
Saguenay
Sept-Iles
Baie-Comeau
Forestville
Tadoussac
Saint-Michel-des-Saints
Mont-Laurier
Ottawa
Kingston
Toronto
Hamilton
London
Windsor
Sault Ste Marie
Thunder Bay
Kenora
Winnipeg
Brandon
Regina
Saskatoon
Prince Albert
Edmonton
Calgary
Lethbridge
Medicine Hat
Fort Nelson
Fort St John
Dawson Creek
Prince Rupert
Vancouver
Victoria
Nanaimo
Kamloops
Prince George
Quesnel
Williams Lake
Whitehorse
Yellowknife
Iqaluit
Churchill
Thompson
Flin Flon
Moosonee
Timmins
Sudbury
North Bay
Kapuskasing
Cochrane
Moosonee
Fort Simpson
Fort Nelson
Fort Smith
Inuvik
Tuktoyaktuk
Resolute
Alert
Eureka
Grise Fiord
Pond Inlet
Cape Dyer
Frobisher Bay
Cape Dorset
Baker Lake
Rankin Inlet
Coppermine
Cambridge Bay
Gjoa Haven
Pelly Bay
Spence Bay
Hall Beach
Clyde River
Pangnirtung
Nanisivik
Arctic Bay
Resolute
Grise Fiord
Eureka
Alert
Ellesmere Island
Baffin Island
Victoria Island
Banks Island
Melville Island
Devon Island
Axel Heiberg Island
Ellesmere Island
Greenland
Hudson Bay
James Bay
Ungava Bay
Foxe Basin
Gulf of Boothia
Amundsen Gulf
Beaufort Sea
Great Bear Lake
Great Slave Lake
Lake Athabasca
Lake Winnipeg
Lake Manitoba
Lake Superior
Lake Huron
Lake Michigan
Lake Ontario
Lake Erie
Lake Nipigon
Lake Abitibi
Lake Mistassini
Lake Nipissing
Lake Simcoe
Lake Winnipeg
Great Bear Lake
Great Slave Lake
Lake Athabasca