

COASTAL CLASSIFICATION NLUS AREA 12 Melville Peninsula - Southampton Island		
CODE	CLASS AND DESCRIPTION	DIAGRAMS (NOT TO SCALE)
Bc	<b>CONTEMPORARY BEACH COMPLEX -</b> High energy depositional environments, which are usually extensive. Spits, bars, lagoons, and bays are common. Ridges and stone beaches all common, as are gravel forelands and raised beaches inland. Coarse sands and gravels are typical materials.	
Br	<b>RAISED BEACH SEQUENCE -</b> Series of beach ridges occurring on slopes steeper than 5° to 10° extending up to 2 km inland. Surface materials are gravel. Narrow contemporary beaches of low energy are ubiquitous. Wider beaches are classed as Bc, and strandlines on generally level plains are classed as G.	
Ca	<b>CLIFFS WITH NO TALUS.</b> Precipitous rock slopes, that range from 65° to vertical or overhanging. The cliff face may include prominent rock ledges. This class has no beach and occurrence is very limited.	
Cb	<b>CLIFFS WITH LESS THAN 1/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM.</b> As class Ca but with up to one third of the height covered by colluvial deposits of various thickness and extent. Colluvium gravel to boulder beaches are common.	
Cc	<b>CLIFFS WITH 1/3 TO 2/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM.</b> As class Cb, but with more extensive colluvium.	
Cd	<b>CLIFFS WITH MORE THAN TWO-THIRDS TALUS.</b> As class Cc, but mostly talus covered. As talus attains complete cover, this class grades into Bc.	
GI	<b>GLACIERS -</b> glacier ice which reaches the sea and results in fill with small gravel beaches. Classes Cb, Cc and Cd are normally found juxtaposed. Where the ice has retreated to leave a gravel plain, class Pg or Fs takes precedence.	
Hb	<b>CLIFFS - ERODING HILLSLOPES.</b> Steep slopes over 10m high of unconsolidated materials, generally free of talus, resulting from past or present erosion at the base. Gullies and a narrow beach to low tide are common.	
Hc	<b>CLIFFS - SHELF BEACHS.</b> Steep slopes over 10m high of unconsolidated materials, generally free of talus, resulting from past or present erosion at the base. Gullies and a narrow beach to low tide are common.	
Hr	<b>ROCKY HILLS.</b> Mainly bedrock controlled slopes, over 5-10° which extend from over 10m elevation. Pockets of colluvium small pocket beaches, and sections of precipitous rock are common. Strathes of narrow, coarse textured beaches may extend along the shoreline. Islands and reefs are common offshore.	
Hs	<b>SLOPES.</b> Steep over 10 m. high slopes of unconsolidated, or weakly consolidated materials, which display rotational or planar slumping. Bowl scars, mud flows, gullies and narrow tidal beaches are common.	
Pb	<b>ERODED PLAINS - CUTBANKS.</b> Coastal plains of unconsolidated, cohesive materials such as clay - till or lacustrine sediments which are eroded at the shoreline to produce low bluff backshores and typically narrow beaches. Similar coasts in bedrock are classified Fc.	
Pc	<b>ROCKY PLAINS WITH LOW CLIFFS.</b> These normally occur as low rock forelands in front of rocky hills or high cliffs with talus. These rock forelands range in width from 10's of metres to 1-2 km and are typically less than 10 m high. Steep cliffs at the seaward end are common. Beaches of any kind are rare.	
Pf	<b>FLUVIAL PLAINS - SANDFLATS -</b> Extensive deposits (up to 100 km <sup>2</sup> ) of unconsolidated alluvial sand and/or silt resulting from rapid terrestrial erosion inland, and coinciding with wave and current free nearshore conditions; microrelief features such as channels and beach ridges are quickly obliterated by wind action. Shorelines may be marked by push ridges, but it is also common to find no beach forms whatever, just a smooth progression from land to sea.	
Pg	<b>IRREGULAR PLAIN (formerly till plain, Pt).</b> Similar to P1 in broad relief - plains of less than 10 m elevation near the coast and slopes typically less than 5° to 10°, coupled with limited beach development and shallow nearshore. Medium to coarse sediments and irregular terrain prevail, such as related to moraine plains or strandlines. Strandlines on progressively inclined surfaces are classified as Br.	
Pi	<b>INCLINED PLAIN:</b> Plains of less than 10 m elevation near the coast and slopes typically less than 5-10°, coupled with limited beach development and shallow nearshore. Fine to medium textured materials and smooth terrain prevail, such as related to emergent marine deposits or pediments. Local drainage is typically parallel and perpendicular to the coast.	
P1	<b>LEVEL PLAIN.</b> Extensive deposits of marine and/or fluvial deposits of fine textured materials coinciding with wave and current free nearshore conditions. Backshore is typically an almost flat relief plain with numerous shallow ponds, and possibly widely spaced low strandlines. Shorelines may be indicated by beach ridges, but it is also common to find no beach forms whatever, just a smooth progression from land to sea. Typically, the plain extends offshore with wide near-shore or tidal flats.	
Po	<b>ORGANIC PLAINS.</b> A very low, often featureless plain or fringe of organic materials, usually associated with very sheltered waters. Shores are low banks of organic accumulations or progressive intermixing of open water and emergent vegetation. Usually regarded as the minor component in a shoreline rating.	
Pr	<b>ROCKY PLAINS.</b> Rocky slopes of low elevation usually less than 10 m and slopes generally less than 5-10°. Patchy colluvial or moraine veneer and pocket beaches and fans and intermittent rock platforms covered by beach deposits are common. Islands, reefs and shoals are common offshore.	
Ps	<b>PLAINS WITH STEEP BACKSHORE (other than rock controlled).</b> Forelands or plains consisting of unconsolidated materials, usually as raised fans or plain with numerous rock platforms covered by beach deposits or present. The plain changes abruptly to a steep backshore usually 20-35° with a narrow contemporary beach.	
Rf	<b>RIVER MOUTH AND FLUVIAL COMPLEXES -</b> includes features associated with river mouths: fans, deltas, estuaries, tidal flats marshes, baymouth bars, spits, etc. Smaller fans grade into Ps where isostatic rebound exceeds the stream's debris supply, causing the fan to be raised and the stream to incise.	
U	<b>UNDIFFERENTIATED RIDGES, HILLS or PLAINS.</b> In cases where imagery is poor and no field checks were made, it may be impossible to determine the sub-class.	
P	<b>NEARSHORE FLAT.</b> Indicates the presence of a low-slope tidal or nearshore flat extending 200 to several hundred metres seaward from shore. The flat may be composed of fine textured materials, particularly if associated with a level plain (P1), or it may be a rock bench or platform with a patchy veneer of fines. On tidal flats, i.e. where tidal range is typically greater than 1.5m, ice-crafted boulders may occur, singly, in nets or as builder barricades.	

**BIBLIOGRAPHY**

Wilson, P.C. 1974. Rocky coasts and mud of North America. *Coastal Geology*, 2: 1-20.

Baugh, J.A. 1978. The geology of the Melville Peninsula. *Geological Journal* 9: 217-232.

... (omitted for brevity) ...

**GENERAL REFERENCES**

Went, R.H. 1949. *Flora of the Antarctic Peninsula*. Cambridge University Press, Cambridge.

Went, R.H. 1953. *Vegetation of the Antarctic Peninsula*. Cambridge University Press, Cambridge.

... (omitted for brevity) ...

**ECOLOGICAL REFERENCES**

Adams, J.A. 1967. Northern Peat Bogs as a New Ecological Barrier. *Vegetatio*, 27: 229-232.

Adams, J.A. 1969. The peat bogs of the Melville Peninsula. *Journal of Ecology*, 57: 153-160.

... (omitted for brevity) ...

**COASTAL INFORMATION**

Bird, J.A. 1965. The morphology of Arctic coasts with special reference to the sea level of Farty Channel. *Journal of Marine Research*, 23: 1-20.

... (omitted for brevity) ...

**MARINE MAMMAL INFORMATION**

Adams, J.A. 1967. *Flora of the Antarctic Peninsula*. Cambridge University Press, Cambridge.

... (omitted for brevity) ...