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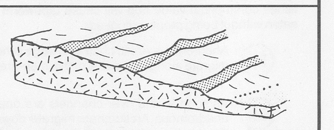
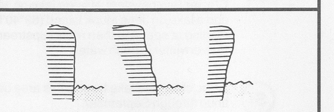
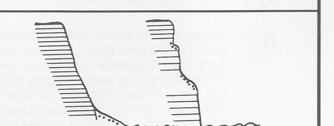
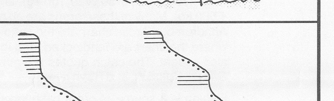
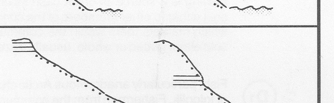
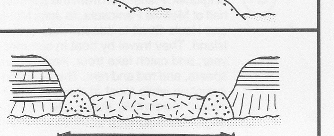
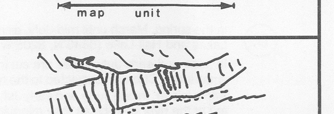
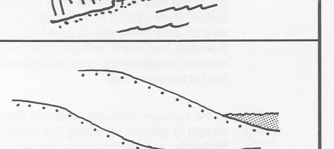
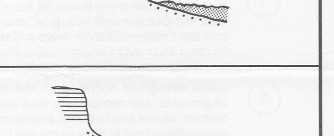
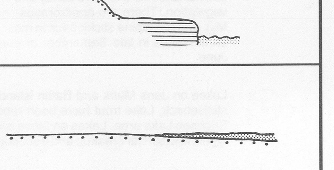
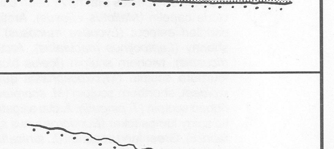
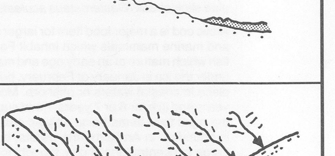
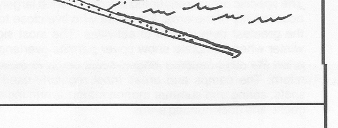
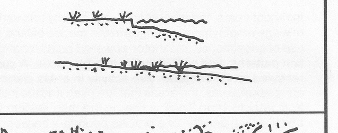
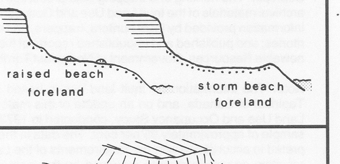
# COASTAL CLASSIFICATION

**NLUIS AREA 12 Melville Peninsula - Southampton Island**

| CODE | CLASS AND DESCRIPTION | DIAGRAMS (NOT TO SCALE) |
|---|---|---|
| Bc | CONTEMPORARY BEACH COMPLEX - High energy depositional environments, which are usually extensive. Spits, bars, lagoons, former beach ridges and storm beaches all common, as are gravel forelands and raised beaches inland. Coarse sands and gravels are typical materials. | |
| Br | RAISED BEACH SEQUENCE - Series of beach ridges occurring on slopes steeper than $5^{\circ}$ to $10^{\circ}$ extending up to 2 km inland. Surface materials are gravel. Narrow comtemporary beaches of low energy are ubiquitous. Wider beaches are classed as Bc, and strandlines on generally level plains are classed as Pg. |  |
| Ca | CLIFFS WITH NO TALUS. Precipitous rock slopes, that range from $65^{\circ}$ to vertical or overhanging. The cliff face may include prominent rock ledges. This class has no beach and occurence is very limited. |  |
| Cb | CLIFFS WITH LESS THAN 1/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM. As class Ca but with up to one third of the height covered by colluvial deposits of various thickness and extent. Colluvium is normally barren to sparsely vegetated. Narrow (1-3m) coarse gravel to boulder beaches are common. |  |
| Cc | CLIFFS WITH 1/3 to 2/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM. As class Cb, but with more extensive colluvium. |  |
| Cd | CLIFFS WITH MORE THAN TWO-THIRDS TALUS. As class Cc, but mostly talus covered. As talus attains complete cover, this class grades into Hc. |  |
| Gl | GLACIERS - glacier ice which reaches the sea and results in calving. Unit includes associated lateral moraines and bluffs of till 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 Ps takes precedence. |   |
| Hb | BLUFFS - ERODING HILLS. 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 at low tide are common. |  |
| Hc | COLLUVIAL HILLSLOPES. Smooth sloping colluvium, typically undergoing sheet wash or solifluction extending to narrow gravel beaches. This class occurs mostly in sheltered waters; exposure to significant wave action would quickly erode these materials and create beach or foreland conditions. This class grades into Cd with increasing slope. |  |
| Hr | ROCKY HILLS. Mainly bedrock controlled slopes, over 5-$10^{\circ}$ which extend from over 10m elevation. Pockets of colluvium small pocket beaches, and sections of precipitous rock slopes are common. Stretches of narrow, coarse textured beaches may extend along the shoreline. Islands and reefs are common offshore. | |
| Hs | SLUMPS, 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 | ERODED PLAINS - CUTBANKS. Coastal plains of unconsolidated, cohesive materials such as clay - till or lacustine sediments which are eroded at the shoreline to produce low bluff backshores and typically narrow beaches. Similar coasts in bedrock are classified Pc. | |
| Pc | ROCKY PLAINS WITH LOW CLIFFS. 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. Near vertical cliffs at the seaward end are common. Beaches of any king are rare. |  |
| Pf | FLUVIAL PLAINS - SANDFLATS - Extensive deposits (up to 100 $km^2$) 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 | IRREGULAR PLAIN (formerly till plain, Pt). Similar to Pi in broad relief - plains of less than 10 m elevation near the coast and slopes typically less than $5^{\circ}$ to $10^{\circ}$, coupled with limited beach development and shallows nearshore. Medium to coarse sediments and irregular terrain prevail, such as related to morainal plains or strandlines. Strandlines on progressively inclined surfaces are classified as Br. |  |
| Pi | INCLINED PLAIN: Plains of less than 10 m elevation near the coast and slopes typically less than 5-$10^{\circ}$, coupled with limited beach development and shallows 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. |  |
| Pl | LEVEL PLAIN. 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 zero 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 | ORGANIC PLAINS. 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 recorded as the minor component in a shoreline rating. |  |
| Pr | ROCKY PLAINS. Rocky slopes of low elevation usually less than 10 m and slopes generally less than 5-$10^{\circ}$. Patchy colluvial or moraine veneer and pocket beaches and fans and intermittent to scattered narrow gravel beaches occur. Islands, reefs and shoals are common offshore. |  |
| Ps | PLAINS WITH STEEP BACKSHORE (other than rock controlled). Forelands or plains consisting of unconsolidated sediments, usually as raised fans or raised marine platforms covered by beach deposits past or present. The plain changes abruptly to a steep backshore usually 20-$35^{\circ}$ with a narrow contemporary beach. | |
| Rf | RIVER MOUTH AND FLUVIAL COMPLEXES - 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 | UNDIFFERENTIATED CLIFFS, HILLS or PLAINS. In cases where imagery is poor and no field checks were made, it may be impossible to determine the sub-class. | |
| P | NEARSHORE FLAT. Indicates the presence of a low-slope tidal or nearshore flat extending 200 to several hundreds of metres off-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, ie. where tidal range is typically greater than 1.5m, ice-rafted boulders may occur, singly, in nets or as boulder barricades. | |