

EROSION AND DEPOSITION ALONG THE LOWER LA GRANDE RIVER, QUEBEC

Figure 3

TEXTURE OF BANKS		STABILITY
SAND	S ₂₅ (Thickness in feet)	Around mouth, subject to serious wave erosion and continuous particle creep. Very unstable.
SILT	I	Subject to slumping and wave erosion.
CLAY	C	Subject to slides and flows especially if saturated or overloaded or if oversteepened.
TILL	T	Relatively stable. If at water level a boulder lag is built up. Generally as drumlins forming points along shore.
BEDROCK	R	Very stable.
PRESENT DYNAMIC CONDITION OF BANKS		DESCRIPTION AND STABILITY
PROCESS TYPE	SYMBOL	
Retrogressive flow slide		Potentially very unstable. Area should be avoided.
Slump - continuous		In mouth region, sand slumps accompanied by continuous particle creep; further upriver mainly as slumping with some flow. 'Continuous' - whole length of bank section is actively eroding and should be avoided.
Slump - discontinuous		'Discontinuous' - slump scars separated by vegetated spurs; should be avoided; clearing could increase erosion.
Vegetated bank	V	Stable if not interfered with. Clearing of protective vegetative cover, removal of beach and/or boulder lag or increasing slope could lead to erosion.
Bedrock	R	Very stable.
Erosive agent (Mainly in mouth area)		
current action		These agents can be combined or where eroding banks are shown without one or more of these symbols slumping is most important and these agents act to remove debris from toe of slide.
ice action		
wave action		
gravity (in areas of mass movement)		
40-60 feet 12 years		Rates of bank retreat where estimated from aerial photos.
AREAS OF ACCRETION AND SEDIMENT MOVEMENT		
		SAND. Occasionally subaerial during free flow period. (Note: around mouth of river, dashed outline is used to delineate distributary channels and small inter-bar channels. In general, stippled areas here are intertidal at low discharge. Boulders occur on the intertidal sand plains and are most likely icerafted as are some mounds of sand in kettle areas thought to develop during spring flood.)
		Crests of bedforms such as dunes. Arrows indicate direction of movement of sand during summer. Letters stand for processes apparently responsible for movement: sp - Beach Drift; C - Current (river); W - Wind.
		Areas of periodic flooding. Floodplain or vegetated supratidal areas near mouth and coast; subject to erosion by floating ice.
		Cobble or boulder lag along shore; acts as rip-rap protecting shore.

