Stabilization Techniques Chart

S = Streambank L = Lakeshore B = Both

Application or Goal	Techniques	Ajacks	Branch Packing	Brush Layering	Brush Mattress	Bulkheads	Coconut Fiber Log	Concrete Block	Erosion Control Fabric	Hay Bale Breakwater	Joint Planting	Jute-mat log	Live Cribwall	Live Fascine	Live Post	Live Siltation	Live Stake	Log Breakwater	Native Forbs & Shrubs	Native Grasses	Non-native seeding
Access/recreation friendly	B						X		X	X		X				X			X	X	X
Adds structural support	B	x				X		X					X		X		X	X			
Adds tensile strength to the bank	B		X	X											X	X	X				
Aides natural regeneration and colonization	B		X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	
Appropriate above and below OHWM/bankfull	B						X					X			X						
Bisects flow	S																				
Controls Grade	S																				
Creates and preserves scour holes	S												X								
Deflects strong or high flows	S														X						
Dewaters slope	B			X							X		X	X	X		X		X	X	X
Enhances Fish Habitat	B																				
Establishs sods and grasses	B								X	X											
Facilitates drainage on wet sites	B				X									X							
Filter barrier to prevent erosion and scouring of bank	B		X	X	X		X		X	X		X		X			X				
Flexible, can be molded to existing contours	B						X		X			X									
Good for protecting bridges, piers and abutments	S																				
Good on lakes where water levels fluctuate	L									X					X			X			
Grows stronger with age	B		X	X	X						X		X	X	X	X	X		X	X	
Hand labor installation	B	x	X	X	X		X		X	X	X	X	X	X	X	X	X		X	X	X
Handles high velocity areas	S			X																	
Handles seepage within banks	B		X	X	X									X	X		X		X	X	
Handles wave heights > 2 feet	L	x				X		X		X						X		X			
Immediate protective cover for the bank	B				X				X				X								
Increases slope stability	B	x	X	X	X			X					X	X	X		X		X	X	
Instant habitat improvement	B																	X			
Little site disturbance	B		X				X		X	X	X	X		X							
Maintains a natural bank appearance	B		X	X	X		X		X			X		X	X	X	X	X			
Manufactured in the field	B		X	X	X					X	X	X	X	X	X	X	X	X			
Maximum site disturbance during construction	B			X									X								
Protects banks from shallow slides	B		X				X				X	X	X	X	X		X				
Provides aquatic habitat	B	x			X						X		X	X			X	X			
Provides shade and overhang habitat benefits	B				X								X	X		X					
Provides shear support in bank soils	B		X	X									X								
Rapid reestablishment of riparian vegetation	B		X	X	X						X	X	X	X	X	X	X				
Redirects Flow	S	X									X		X	X		X		X			
Reduces a long beach wash into shorter segments	L													X		X					
Reduces shallow slides	B		X	X	X						X		X	X	X		X		X	X	
Reduces slope length	B		X	X			X					X		X	X		X				
Reduces surface erosion	B			X			X					X		X							

Reduces toe erosion	B				X		X			X		X	X	X			X				
Reduces velocity of overland flows	B		X	X	X		X		X			X		X			X		X	X	
Reduces wind and water velocities hitting bank	B									X					X	X		X			
Requires heavy equipment	B					X		X										X			
Retains moisture	B								X	X		X									
Roots stabilize banks	B		X	X	X						X		X	X	X	X	X				
Steep banks (>1.5:1)	B	X		X		X		X			X			X	X		X		X	X	
Surface runoff control	B		X	X	X				X			X	X	X	X		X		X	X	X
Survives fluctuating water levels	L	X				X		X							X						
Survives high velocity flows	S	X				X		X							X						
Traps sediment	B		X	X	X		X		X	X	X	X	X	X		X					
Uncemented soils and sugar sands	B	X	X	X	X	X		X			X	X	X	X	X		X		X	X	
Useful where space is limited	B				X		X					X	X	X	X	X	X				
	According to the Streambank and Shoreline Protection Standard (580), all techniques will require a "structural" measure in the toe zone as described in EFH Chapter 16																				
	Most practices require a permit from the Wisconsin Department of Natural Resources and other local agencies. Plan for the ability to get such permits when choosing a treatment option - some may be di																				
NOTES:	DO NOT USE SOIL BIOENGINEERING ALONE ON STREAMS THAT ARE UNSTABLE FROM A GEOMORPHIC PERSPECTIVE (i.e. widening or downcutting)																				
	DO NOT USE SOIL BIOENGINEERING ALONE ON LAKESHORES WHERE ICE DAMAGE IS A PROBLEM																				

Pilings	Plant Mat	Plant Roll	Rock Gabions	Rock Riprap	Root Wad	Rooted Stock	Snow Fence	Stream barbs, rock vanes	Submerged Vanes	Temporary Seeding	Terraced Crib	Tree and Log Revetment	Trench Pack	Vegetated Gabions	Vegetated Geogrid	W-weirs											
	X									X																	
X			X	X				X			X	X		X	X	X											
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		X			X	X						X	X		X												
ficult to acquire (i.e. Ajacks, Bulkheads, Concrete Block, Rock Gabions, Stream Barbs, etc.)																											