Restoring Riparian Connectivity: Culvert Replacement Assessment

Goal: "A channel that simulates characteristics of the natural channel will present no more of a challenge to movement of organisms than the natural channel."

      -- Design seamlessly connects downstream and upstream channel profiles.

Culvert Characteristic	Improved	Neutral	Degraded
Upstream hydrology	buffered	neutral	flashy
Notes			
Channel slope, local	< adjacent slopes	= adjacent slopes	> adjacent slopes
Notes			
Channel slope, overall	< mean stream slope	= mean stream slope	> mean stream slope
Notes			
Bankfull width	> adjacent reaches	= adjacent reaches	< adjacent reaches
Notes			
Channel bedform (culvert,LWD,bedrock)	More complex	Equivalent to adjacent	Bare culvert surface
Notes			
Channel mobility-stability	Resilient channel	Stable channel	Unstable channel
Notes			
Bank continuity	Culvert wider bank	Continuous banks	Constricting culvert
Notes			
Channel roughness	Roughness>adjacent	Equivalent to adjacent	Straight channel
Notes			
Knick points & incision	None	Continuous depth profile	Nick point @ culvert
Notes			
Scour pool mechanism	None	Localized plunge pool	Incision up to culvert
Notes			
Scour pool depth	None	Shallow	Deep
Notes			
Drop structures	rock, log weirs@all	Some rock, log weirs	None; sediment
Notes			
Profile restoration w/LWD	LWD-restore profile	Some LWD	No LWD
Notes			
Summary			

Priorities for improvement _____

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Opportunities/strategies for improvement _____

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