

Pfankuch-Rosgen Channel Stability Evaluation

Category			EXCELLENT	
Upper Banks	1	Landform Slope	Bank slope gradient < 30%	2
	2	Mass Wasting	No evidence	3
	3	Debris Jam Potential	Essentially absent	2
	4	Vegetative Bank Protection	90% plant density and vigorous	3
Lower Banks	5	Channel Capacity	Ample, peak flows contained, W/D ratio <7	1
	6	Bank Rock Content	65%+ large angular boulders. 12-in + size	2
	7	Obstructions to Flow	Rocks and logs imbedded	2
	8	Cutting	Little or none. Raw bank less than 6-in	4
	9	Deposition	Little or no enlargement of point bars	4
Bottom	10	Rock Angularity	Sharp edges and corners	1
	11	Brightness	Surfaces dull, dark, and stained	1
	12	Consolidation of Particles	Assorted sizes, tightly packed	2
	13	Bottom Size Distribution	No size change evident. 80-100% stable bed	4
	14	Scouring and Deposition	<5% bottom affected by scour	6
	15	Aquatic Vegetation	Abundant. Moss-like perennial in swift water	1

Pfankuch-Rosgen Channel Stability Evaluation

		Category	GOOD	
Upper Banks	1	Landform Slope	Bank slope gradient 30-40%	4
	2	Mass Wasting	Infrequent and healed over	6
	3	Debris Jam Potential	Present as small twigs and limbs	4
	4	Vegetative Bank Protection	70-90% plant density and less vigorous	6
Lower Banks	5	Channel Capacity	Adequate, overflows rare, W/D ratio 8-15	2
	6	Bank Rock Content	40-65% small boulders. 6-12-in size	4
	7	Obstructions to Flow	Some present causing erosive currents	4
	8	Cutting	Some at outcurves. Raw bank 12-in	6
	9	Deposition	Some new bar increase by coarse gravel	8
Bottom	10	Rock Angularity	Rounded corners and edges	2
	11	Brightness	Mostly dull, maybe < 35% bright surfaces	2
	12	Consolidation of Particles	Moderately packed with some overlapping	4
	13	Bottom Size Distribution	Distribution shift light. 50-80% stable bed	8
	14	Scouring and Deposition	5-30% bottom affected by scour	12
	15	Aquatic Vegetation	Common. Algae forms in low velocity pools	2

Pfankuch-Rosgen Channel Stability Evaluation

Category			FAIR	
Upper Banks	1	Landform Slope	Bank slope gradient 40-60%	6
	2	Mass Wasting	Frequent or large, causing regular sediment	9
	3	Debris Jam Potential	Moderate to heavy, mostly larger sizes	6
	4	Vegetative Bank Protection	<50-70% plant density and lower vigor	9
Lower Banks	5	Channel Capacity	Barely contains peak flows, W/D ratio 15-25	3
	6	Bank Rock Content	20-40% cobbles. 3-6-in size	6
	7	Obstructions to Flow	Moderate. Move with high flows.	6
	8	Cutting	Significant. Raw bank cuts 12-24-in	12
	9	Deposition	Moderate. New gravel and sand on bars	12
Bottom	10	Rock Angularity	Edges and corners well rounded	3
	11	Brightness	Mixture dull and bright. 35-65% mixture	3
	12	Consolidation of Particles	Mostly loose assortment, no overlap noted	6
	13	Bottom Size Distribution	Moderate change in sizes. 20-50% stable bed	12
	14	Scouring and Deposition	30-50% affected by scour. Pools filling	18
	15	Aquatic Vegetation	Spotty. In back water. Seasonal algae	3

Pfankuch-Rosgen Channel Stability Evaluation

Category			POOR	
Upper Banks	1	Landform Slope	Bank Slope Gradient >60%	8
	2	Mass Wasting	Frequent, causing regular sediment & danger	12
	3	Debris Jam Potential	Moderate to heavy, predominantly larger size	8
	4	Vegetative Bank Protection	<50% plant density and poor vigor	12
Lower Banks	5	Channel Capacity	Inadequate, overflow common, W/D ratio>25	4
	6	Bank Rock Content	<20% gravel and rock. 1-3-in size	8
	7	Obstructions to Flow	Sediment traps full. Migration occurring	8
	8	Cutting	Almost continuous. Some raw bank >24-in	16
	9	Deposition	Extensive deposits, fine particles. New bars	16
Bottom	10	Rock Angularity	Well rounded in all dimensions	4
	11	Brightness	Predominantly bright. 65% exposed surfaces	4
	12	Consolidation of Particles	No packing evident. Easily moved.	8
	13	Bottom Size Distribution	Marked distribution change. 0-20% stable bed	16
	14	Scouring and Deposition	>50% bottom regularly affected by scour	24
	15	Aquatic Vegetation	Perennial types scarce or absent	4