Pfankuch D.J. 1975. Stream reach inventory and channel stability evaluation. USDA Forest Service Northern Region, Montana.

UPPER BANKS	**EXCELLENT**		**GOOD**		**FAIR**		**POOR**	
Landform slope	Bank slope gradient <30%	**2**	Bank slope gradient 30-40%	**4**	Bank slope gradient 40-60%	**6**	Bank slope gradient >60%	**8**
Mass-wasting (existing or potential)	No evidence of post or any potential for future mass-wasting into channel.	**3**	Infrequent and/or very small. Mostly healed over. Low future potential.	**6**	Moderate frequency and size, with some raw spots eroded by water during high flows.	**9**	Frequent or large, causing sediment OR imminent danger of same.	**12**
Debris jam potential (floatable objects)	Essentially absent from immediate channel area.	**2**	Present but mostly small twigs and limbs.	**4**	Present, volume and size are both increasing,	**6**	Moderate to heavy amounts, mainly larger sizes.	**8**
Vegetative bank protection	>90% plant density. Vigor and variety suggests a deep, dense, soil binding root mass.	**3**	70-90% density. Fewer plant species or lower vigor suggests a less dense or deep root mass.	**6**	50-70% density. Lower vigor and species form a somewhat shallow and discontinuous root mass.	**9**	<50% density plus fewer species and vigor indicate discontinuous and shallow root mass.	**12**
Channel capacity **LOWER BANKS**	Ample for present plus some increases. Peak flows contained. Width to Depth (W/D) ratio <7.	**1**	Adequate. Overbank flows rare. W/D ratio 8 to 15.	**2**	Barely contains present peaks. Occasional over-bank floods. W/D ratio 15 to 25.	**3**	Inadequate. Overbank flows common. W/D ratio >25.	**4**
Bank rock content	65% with large, angular boulders 30cm numerous.	**2**	40 to 65'%, mostly small boulders to cobbles 15-30cm.	**4**	20 to 401, with most in the 7.5-15cm diameter class.	**6**	<20% rock fragments of gravel sizes, 2.5-7.5 cm or less.	**8**
Obstructions (flow deflectors Sediment traps)	Rocks and old logs firmly embedded. Flow pattern without cutting or deposition. Pools and riffles stable.	**2**	Some present, causing erosive cross currents and minor pool filling. Obstructions and deflectors newer and less firm.	**4**	Moderately frequent, unstable obstructions and deflectors move with high water causing bank cutting and filling of pools.	**6**	Frequent obstructions and deflectors cause bank erosion. Sediment traps' full channel migration occurring.	**8**
Undercutting	Little or none evident. Infrequent raw banks <150cm high.	**4**	Some, intermittently at outcurves and constrictions. Raw banks <30cm.	**8**	Significant. Cuts 15-30cm high. Root mat overhangs and sloughing evident.	**12**	Almost continuous cuts, some >30cm high. Failure of overhangs	**16**
Deposition **STREAM BED**	Little or no enlargement of channel or point bars.	**4**	Some new increase in bar formation, mostly from coarse gravels.	**8**	Moderate deposition of new gravel and coarse sand on old and some new bars.	**12**	Extensive deposits of predominantly fine particles. Accelerated	**16**
Rock angularity	Sharp edges and corners, plane surfaces roughened.	**1**	Rounded corners and edges. Smooth and flat.	**2**	Corners and edges wel1 rounded in two dimensions.	**3**	Well rounded in all dimensions.	**4**
Brightness	Surfaces dull, darkened or stained. Not "bright".	**1**	Mostly dull, but may have up to 35% bright surfaces.	**2**	Mixture, 50-50% dull and bright i.e. 35-65%.	**3**	Predominantly bright, 65%, exposed surfaces.	**4**
Consolidation or particle packing	Assorted sizes tightly packed and/or overlapping.	**2**	Moderately packed with some overlapping.	**4**	Mostly a loose assortment with no apparent overlap.	**6**	No packing evident. Loose, easily moved.	**8**
Bottom size distribution & stable	No change in sizes evident. Stable materials 80-100%	**4**	Distribution shift slight. Stable materials 50-80%.	**8**	Moderate change in sizes. Stable materials 20-50%	**12**	Marked change. Stable materials 0-20%	**16**
Scouring and deposition	<5% of the bottom affected by scouring and deposition.	**6**	5-30% affected. Scour at constrictions and where steep. Pool deposition.	**12**	30-50% affected. Deposits and scour at obstructions, constrictions, and bends.	**18**	> 50% of bed in a state of flux or change nearly year-long.	**24**
Clinging aquatic vegetation (moss and algae)	Abundant, growth largely moss, dark green, perennial. In swift water too.	**1**	Common. Algal forms in low velocity and pool areas. Moss and swifter waters.	**2**	Present but spotty, mostly in backwater areas. Seasonal blooms	**3**	Perennial types scarce or absent. Yellow-green, short term bloom present.	**4**
COLUMN TOTALS								

Reach score of: <38 = Excellent, 39-76 = Good, 77-114 = Fair, 115+ = Poor