

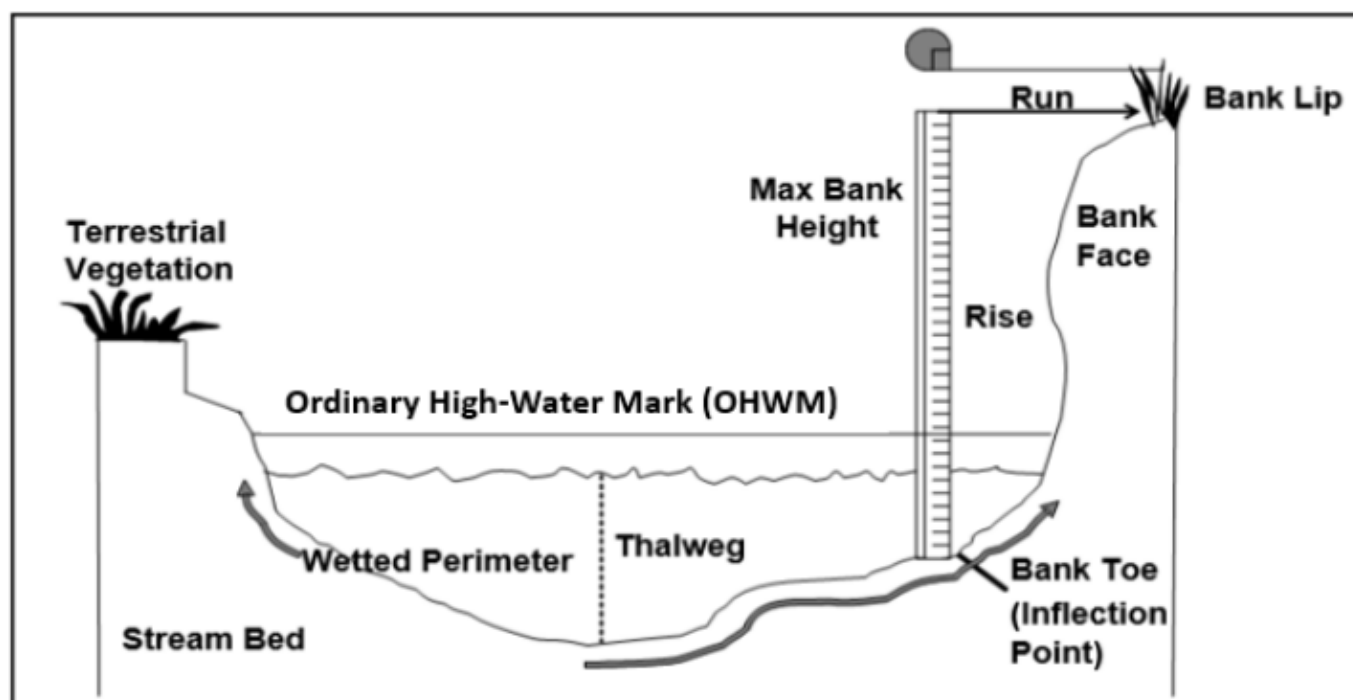
Bank Erosion Potential Index (BEPI) Score Worksheet

(Adapted from Rosgen, David L. "A Practical Method of Computing Streambank Erosion Rate", Wildland Hydrology Inc., Pagosa Springs, CO, 10 pp.)

STREAMBANK VARIABLES	DESCRIPTIVE CATEGORIES Note: Erosion potential value is located in parentheses on the bottom of each category box						ASSIGNED BEPI VALUE
BANK MATERIALS predominance of bank materials at toe (between bed and OHWM on bank face).	Bedrock Outcrop <i>Stop assessment</i> BEPI = 0	Cobble > 3 inches (-10)	Silt/Clay (0)	Gravel < 3 inches (5)	Sandy gravel (7)	Non-plastic sands and silts (10)	
HYDRAULIC INFLUENCE OF UPSTREAM STRUCTURES distance (number of channel widths) to bridges, culverts, or dams. Calculation: Number of Channel Widths = Stream Distance to Structure / Average Channel Width	10+ channel widths (1)	5.1 – 10 channel widths (2)		2.1 – 5 channel widths (3)		0 – 2 channel widths (4)	
MAX BANK HEIGHT (feet) Divided by the OHWM Height (feet)	1 – 1.19; very low or low (2)	1.2 – 1.5; medium (5)	1.6 – 2.0; high (7)		2.1 – 2.8; very high (8)	> 2.8; extreme (10)	
BANK SLOPE (degrees) measure rise/run and translate into angel degree. Calculation: Bank Slope = Inverse Tangent (Rise/Run)	0 – 20; very low (1)	21 – 60; low (3)	61 – 80; moderate (5)		81 – 90; vertical (7)	91+; undercut (10)	
STRATIFICATION or BANK LAYERING type of soil layering occurring on the bank face.	no stratification (0)	No stratification, seepage present (3)	Stratified above OHWM (4)		Stratified above OHWM with seepage present, or stratified below OHWM (7)	Stratified below OHWM with visual seepage (10)	

<i>BANK VEGETATION</i> abundance of the vegetation, roots, and tree-falls occurring between the OHWM and the bank lip.	Rock outcrop bank unable to support vegetation (-7)	dense vegetation < 30% bare soil visible (-4)	Clumps of vegetation 30-59% bare soil visible (0)	Sparse vegetation 60-90% bare soil visible (4)	Vegetation absent > 90% bare soil visible (7)	
<i>THALWEG LOCATION</i> deepest part of the channel or the location of stream current.	Located across the stream, against opposite bank (0)		Flowing down the center of the stream channel (2)		Immediately adjacent to bank proposed for erosion control (8)	
BANK EROSION POTENTIAL INDEX (BEPI) SCORE						

*To measure the **bank slope** (degrees), the rise and run must be measured from the bank toe to the top of the bank lip. With your measure tape or stick, place the end firmly on the bank toe, parallel to the bank face and measure up to the bank lip to find the rise or max bank height. Then measure the run from the bank toe to the bank lip. From these measures, you should be able to calculate the bank slope with the formula ‘bank slope=inverse tangent (rise/run)’.



***Thalweg** means the deepest part of the channel or the location of fastest current. To find the thalweg, the channel must be divided into thirds. The applicant needs to perform one or a mixture of tests for the three segments in determining its location. The following tests are suggested: float an object such as an orange peel down the stream to find the segment of fastest current, find the segment with the bubble line visible at the water's surface, or find the deepest part of the channel, if safe. After locating the thalweg, record its proximity to the tested bank, adjacent (closest), center, or opposite (furthest) and record its associated point value.

