

Landscape Function Analysis

Ephemeral Drainage-line Assessment (EDA): Tables for Scoring Indicators of Stability (Health)

Table EDA.1. Steepness of slopes above and bordering a drainage line

Score	Description
1	Very steep, > 30 deg. enabling high flow velocities into the drainage line over walls
2	Steep, 10-30 deg. creating moderate to high velocity flows into the drainage line
3	Moderately sloped, 5-10 deg., generating moderate flow velocities into the drainage line
4	Gently sloped, laterally extensive, < 5 deg., generating moderate to low velocity flows into the drainage line over walls
5	Nearly flat, laterally extensive, generating low velocity flows over drainage line walls

Table EDA.2. Surfaces on slopes above and bordering a drainage line

Score	Description
1	Bare slopes with side-arm channels: very high inflow rates, copious sediment
2	Bare slopes by drainage line, laterally extensive, high inflow rates, moderate sediment
3	Sparsely covered slopes with bare-soil bank lip: moderate flow rate, some highly focused inflows, low sediment
4	Densely covered slopes: low and diffused inflows, very low sediment visible
5	Very densely covered slopes with litter and coarse woody debris: very low and diffused inflows, no observable sediment movement

Table EDA.3. Vegetation on drainage line walls

Score	Description
1	Little or no vegetation growing on drainage line walls
2	Vegetation present is mainly ephemeral, allowing sediment to flow past
3	Dense perennial plant covers walls with observable sediment control

Table EDA.4. Vegetation on drainage line floors

Rating	Description
1	Little or no vegetation growing on drainage line floor; flow rates too high to permit plant growth
2	Any vegetation present is annual or short-lived: partial burial of plants by recently deposited sediment evident
3	Dense perennial plant cover, similar to vegetation on the bank of the drainage line: or characteristic wetland species composition: no observable plant burial by sediment

Table EDA.5. Drainage line cross-sectional shape indicator.

Score	Description
1	Drainage line walls nearly vertical; depth typically greater than width; Signs of active erosion include side-wall caving, mass wasting and tunnelling. Fine sediments have been washed away from the base of the walls.
2	Drainage line walls also near vertical but signs of erosion are less severe; depth about equal to width: slight undercutting of walls, and some sediment deposits are visible along drainage line walls.
3	Drainage line wall angles moderate with both bank and bed edges typically rounded and stabilising: width greater than depth;. Some deposits of sediment at base of walls.
4	Drainage line wall angles low to moderate and clearly stabilising; width greater than depth. Maybe some low, small sediment deposits at base of side walls.
5	Drainage line walls gently sloping and strongly vegetated; width typically much greater than depth;; Drainage line has obviously been stable for a considerable period of time: indications of spontaneous restoration.

Table EDA.6. Drainage line longitudinal profile indicator.

Score	Description
1	Drainage line currently incised into a drainage line channel where existing sediments are within scour holes and are deposited along the channel. Flow substantially linear
2	Drainage line channel flat and continuous with deposits of loose sediment and signs of slow and recent sediment movements along the channel. Flow noticeably sinuous
3	Drainage line channel flat but with a cohesive, fine textured and "soil-like" floor; no or only a few signs of sediment movement evident along the channel. Meandering bed shape, with point bars.
4	Drainage line channel well vegetated between non-cascading chain of ponds with cohesive fine sediment /organic matter floors; no signs of sediment movement down the channel are evident. Typically, this type of channel is closely connected to its floodplain and gentle over-bank deposition may occur.

Table EDA.7. Drainage line wall erodability indicator.

Score	Description
1	Dispersive materials are exposed for greater than 1 m of drainage line wall height.
2	Materials that readily slake are exposed on greater than 0.3 m but less than 1 m of drainage line wall height (use the sum of multiple layers if they are present).
3	Materials with noticeable slaking are exposed on less than 0.3 m of drainage line wall height.
4	No unstable materials are exposed on drainage line walls.

Table EDA.8. Drainage line floor erodability indicator.

Score	Description
1	Materials on the drainage line floor have a particle size and density similar to (or smaller than) materials in the walls; For example, fine silt or sand deposits on the floor and coarser materials in the walls.
2	Materials on the drainage line floor are somewhat larger in particle size and denser (more consolidated) than materials in the walls; For example, gravel deposits on the floor and coarse sands in the walls.
3	Materials on the drainage line floor are much larger in particle size and denser than materials in the walls: For example, the floor is armoured with stones and rocks and the wall has coarse sands.