

Choosing the Right Technique

Diagnose the process first, then match the treatment

How to use this sheet

Use this sheet as a field conversation starter after observing the site. The right method depends on what is causing erosion, instability or failed recovery. The matrix below is a prompt for assessment, not a standalone design decision.

Six questions to ask

- What is the primary failure mechanism: surface erosion, scour, seepage, compaction, raveling, or another process?
- What is the moisture regime through the season?
- Is the slope or bank globally stable enough for the proposed treatment?
- What are the flow energy, sediment movement and access constraints?
- Which species and source material match the site?
- Does the site need a combination of treatments rather than one method?

Quick matching prompts

Compacted, smooth large disturbance	Consider rough and loose as surface preparation; reassess whether live staking or another treatment is also needed.
Moist over-steepened slope	Wattle fencing and live staking may fit where soil moisture and stability support rooting.
Dry or raveling slope	Modified brush layers or rough-and-loose approaches may better match the constraint.
Seepage-driven instability	Surface treatment alone does not address subsurface water; assess drainage such as live pole drains.
Active stream scour	Live stakes may be removed before rooting; assess bank protection or palisade options against flow energy.
Bare gravel bar	Assess live gravel bar staking and the need to reach subsurface moisture.

Common selection failures

- Choosing a technique because material is available or familiar.
- Copying a treatment from another site without comparing moisture, substrate and failure mechanism.
- Calling a deep-seated movement a surface-erosion problem.
- Specifying a single method before checking whether a combination is required.

Field check before you leave the site

☐ Failure mechanism written in plain language	☐ Moisture and substrate observed
☐ Slope or bank stability considered	☐ Flow and sediment movement considered
☐ Access and equipment constraints recorded	☐ Technique and species fit explained

Limits and next step

Use these prompts to organize observations and discuss suitable methods. When water, mass movement, infrastructure, public safety or regulated habitat is involved, pause for the appropriate qualified assessment, design and approvals.

Grounded in current course topics. Sources: [Open the course](#) | [Read the source topics](#)