

Gully Erosion

Options for Prevention & Rehabilitation



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Management Factors that can Increase Erosion

- Roads and tracks
- Fences
- Firebreaks
- Dam by-washes
- Stock pads
- Furrows in cultivation that can develop into rills that become gullies
- Failed contour banks and waterways
- Levee banks or diversion banks that direct runoff to an incised stream
- Saline areas

Rehabilitation Options

Construction

- Diversion Banks and Stick Rake lines
 - Divert water
 - Fill gully and level
 - Fence, seed fertilise
 - Manage revegetation and cover
- Swales and Pondage Banks
 - Slows water and ponds for more infiltration.
 - Fence, seed, mulch
- Chutes and Mattresses: Mainly rock, gravel and geofabric used for these constructions
 - Design structure to take expected flows
 - Decide on materials for use
 - Construct chute or mattress and divert flows to the structure
 - Seed, fertilise any bare areas
 - Fence and manage cover

Stick Rake lines Completed



GeoFabrics



Completed Diversion Bank and Gully Fill



Completed Chutes



Completed Chutes



Completed Chutes



Completed Chutes



Chute construction



Completed Chutes



Completed Mattresses



Rock mattress in creek bed gully



Pondage and Swales



Other Erosion Control Structures

Dams, Weirs and Drop Structures

- Dams can be used to inundate gully heads as well as provide a water source and detention area.
- Weirs of many types can be used to help silt up and revegetate gully floors
- Drop structures can be used at a gully head to stop the progress of the gully.

Completed Dams



Completed Weirs



Completed Weirs



Completed Drop Structures



Geofabric Drop Structures



Summary

- ▶ Soil erosion control is an iterative, continuous learning process.
- ▶ There is no structure or strategy which you can set and forget
- ▶ Monitoring and maintenance is absolutely imperative and this has to happen after each rainfall event to be timely.
- ▶ There is no right answer, all sites are affected by cost, capacity and time constraints.
- ▶ **The key to erosion control is managing groundcover and water.**

Questions

