



Local Land
Services



Gully Erosion

Examples and Treatments

Gully Erosion

Gullies

A gully is an open incised erosion channel in the landscape, generally greater than 30cm deep. Gullies are characterized by moderately to very gently sloping floors and steep walls.

They vary widely in shape, depending on soil type, landform and the runoff characteristics of the catchment. They may be wide in relation to depth or deep and narrow, and of the “U” or “V” cross section



Gully Erosion

Causes of Gully Erosion

- Water flow
- Continuous cropping
- Cultivation of drainage lines
- Overstocking
- Over clearing of trees
- Unsuitable land use and management
- Stock and vehicle tracks
- Poor fence location
- Rabbit warrens
- Erodibility of the soil



Gully Erosion

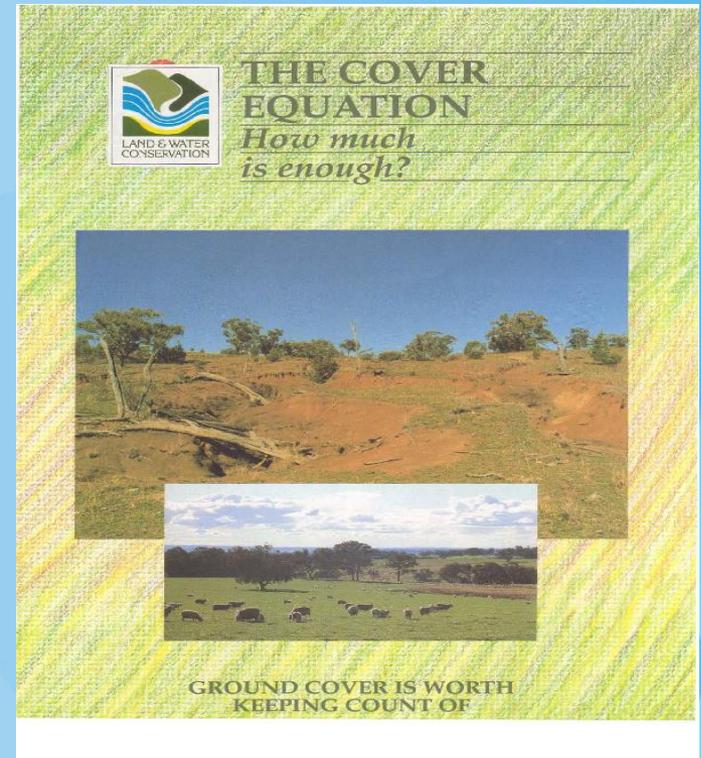
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Gully Erosion

Ground Cover



Gully Erosion

Effects of Gully Erosion

- They are non-productive land
- They are a continuing source of soil loss
- Sediment transported from these gullies may cause sedimentation of dams and water courses
- They restrict access and are a hazard to people, machinery and livestock
- They are a harbour for pests and weeds
- They can damage public utilities such as roads, culverts and bridges



Gully Erosion

Treatment for Gully Erosion

- Earthmoving techniques to shape or fill the gully
- Diverting excess water
- Constructing drop structures or flumes
- Drowning the head of the gully with a dam
- Fencing to exclude stock and revegetate
- Tree planting or sowing or soil holding plants along edges



Gully Erosion – Example of Treatment

Before



Gully Erosion – Example of Treatment

After Earthworks



Gully Erosion – Example of Treatment

12 months later



Gully Erosion – Example of Treatment

Eroded Gully



Gully Erosion – Example of Treatment

Gully after filling



Gully Erosion – Example of Treatment

Dam to regulate water flow



Gully Erosion – Example of Treatment

Dam with a sump and pipe to regulate water flow



EPA Project – Gully Rehabilitation to prevent siltation of Lachlan River

- Gully Head before work commenced



EPA Project – Gully Rehabilitation to prevent siltation of Lachlan River



EPA Project – Gully Rehabilitation to prevent siltation of Lachlan River

- Conveyor belt chute to carry water and deliver it to creek bed



EPA Project – Gully Rehabilitation to prevent siltation of Lachlan River

- Finished project



EPA Project – Gully Rehabilitation to prevent siltation of Lachlan River

- 12 months after work completed
- Area fenced off and stock excluded



Concrete Flume used to carry concentrated runoff water into the stable floor of the gully

- Construction of concrete chute



Concrete Flume used to carry concentrated runoff water into the stable floor of the gully



Concrete Flume used to carry concentrated runoff water into the stable floor of the gully

- Concrete Chute



Concrete Flume used to carry concentrated runoff water into the stable floor of the gully

- Concrete Chute



The Islands Landcare Project Before & After

- Gully approximately 3m deep and 8m Wide



The Islands Landcare Project Before & After

- Soil is pushed in from both sides of the gully.
- Top soil is saved and spread over the site once works is completed.



The Islands Landcare Project Before & After

- After Earthworks



The Islands Landcare Project Before & After

- 6 months after completed work



Hovells Creek Landcare Project

- Sediment build up and eroded gully



Hovells Creek Landcare Project

- Construction of rock lined channel with geofabric



Hovells Creek Landcare Project

- Rock lined Channel

