



Adelaide Hills
COUNCIL

Watercourses

Rivers and creeks are an iconic part of the landscape in the Adelaide Hills and they play important part in local agricultural enterprises, providing ecosystem services and resilience in our communities.



Image: P.Watton

Fast Facts:

- Adelaide Hills watercourses supply drinking water for up to 60% of metropolitan Adelaide.
- Well-managed watercourses, with a good cover of native vegetation, are natural water filters for both domestic and stock use, and provide valuable habitat for animals and plants along their banks.
- We all have a responsibility to manage our watercourses in a sustainable manner.

Overview

A watercourse is a location in the landscape where water flows at any time of the year.

Watercourses are vital habitats for a range of plant and animal species, providing food, water and shelter for wildlife, as well as corridors for their movement.

During heavy rain events good watercourse management can slow the flow of water, reducing the risk of flash floods. They also help wet local soils and offset the impact of dry periods.

Buffer zones are part of good watercourse management. Buffers reduce the loss of valuable nutrients and soil from your land, which would otherwise create unhealthy drinking sources for livestock, wildlife, and downstream water users.



Image: R.Eden

Watercourses are dynamic

Watercourses are naturally dynamic and ever-changing. Over time, the bed and banks of creeks and rivers change due to erosion and the movement and deposition of silt.

Watercourses are areas of high biodiversity, but also have high potential for weeds. Species such as exotic trees and woody weeds establish with ease downstream, so it is vitally important to control invasive weed species in your watercourse to prevent such infestations.

Exotic deciduous, or leaf-shedding, trees are prolific throughout the Adelaide Hills and have become quite a feature of the landscape.

Unfortunately, these types of trees are not suited to the Australian environment. Fallen leaves slow the flow of waterways, which reduces oxygen and contributes to algal blooms, leading to displacement of native flora and fauna.

Impact of leaf litter on water quality

Deciduous trees are those types that drop all of their leaves over a short period of time, typically at the end of autumn. By comparison, Eucalypts tend to drop their leaves across the full year (though more so in the summer).

The leaves of deciduous trees are also a softer material that decomposes far more quickly than our aquatic macro-fauna can process.

This large load of organic material, coupled with rapid breakdown by microbes, results in an excessive release of nutrients into water systems and a deterioration in water quality.

Plan your stock water

Watercourses are a source of water for stock animals, but regular trampling from hard hooves, and the nutrient loads from manure, are very damaging.

Stock watering facilities should be located away from streams. If stock access to streams is necessary, it should be restricted to areas where the banks are stable and not prone to collapse. Designate and fence in the area chosen for this purpose.

Ideally, plan your stock water in a way that protects your watercourses by using alternatives such as water troughs.

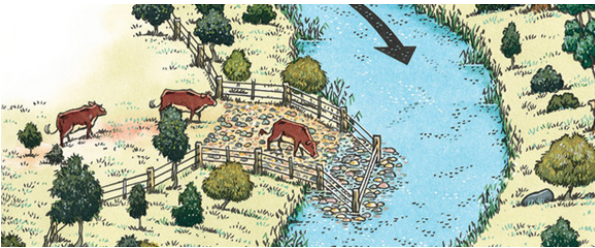


Illustration: Paul Lennon. Source: Staton, J & O'Sullivan (2019). Stock and Waterways: a NSW Manager's Guide.

Watercourse restoration

Watercourse restoration takes careful planning. Before embarking on a restoration project, consult an expert about the effectiveness of your proposed activities. They will also be able to confirm that your project will abide by the Landscapes South Australia Act 2019.

Activities land managers can do to protect and enhance watercourses:

- Promote native habitat regeneration through weed control and the planting of native species suitable for purpose.
- Encourage life-long pasture management plans in paddock areas adjoining watercourses.
- Eliminate stock access to dams and watercourses by using stockproof fencing.
- Consider planting local indigenous plant species on your property.
- Minimise grazing pressure from pest animals.
- Consider restoration of degraded water banks and the control of weeds and exotic deciduous trees.
- Avoid feeding stock in watercourse areas.



Legislation

In South Australia all persons have a statutory duty of care to act reasonably and responsibly in relation to the management of natural resources. This includes an obligation to maintain and not damage a watercourse, floodplain or lake. If you are planning to undertake work in a watercourse, may need to apply for a Water Affecting Activity permit, pursuant to Section 112 of the Landscape South Australia Act 2019.

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