

4. Catchment Care

Discussion topics and information

What can be done to improve the health of catchments?

Each land use can lessen its impacts on the catchment by improving management practices. Specific ideas for each land use are included as *pollution solution hints* in the 'Catchment Capers' exercise (Activity 5).

A catchment's health depends on both the aquatic ecosystems, and the terrestrial (land) environment. It is therefore important that the whole catchment be considered if improvements to water quality and aquatic habitat are to be successful. This concept is the basis of 'Integrated Catchment Management' an approach to environmental management.

Broadly the following measures could be used to improve catchment health:

Revegetation - using local native species, revegetation will provide a number of functions, such as: preventing erosion of soil into waterways, stabilising stream banks, filtering water, providing habitat for native species of animals, preventing rising watertables (a cause of salinity) and improving the biodiversity of the catchment.

Stream restoration - returning waterways back to a condition resembling their original natural form. Removing exotic pest plants which smother native vegetation and cause erosion, planting indigenous vegetation, installing erosion control structures and placing of woody debris are some methods of stream restoration. These aim to provide habitat, stabilise banks and slow fast water flows which cause erosion.

Water conservation - by reducing the amount of water taken from waterways, we can ensure that the water requirements of the ecosystem can be met. Currently, about 70% of flow does not reach the mouth of the Onkaparinga because so much is diverted for water consumption.

Elimination of feral species - feral plants and animals reduce the catchment's biodiversity and can have a negative effect on water quality. Eliminating weeds and feral animals will remove a significant threat facing natural ecosystems.

Pollution prevention

Rural pollution - preventing stock access to waterways using fencing and alternative water sources; limiting chemical use and following best-practice guidelines; revegetating waterways to prevent erosion.

Stormwater pollution - 'the drain is just for rain'... replacing deciduous trees with natives; composting lawn clippings and other garden waste; limiting fertiliser and pesticide use; not washing car or other machinery and equipment on driveways and other sealed surfaces; picking up dog poo; correct disposal of rubbish; fixing oil leaks.

What does a healthy river look like?

An ecologically healthy river will have flow regimes, water quality and channel characteristics such that:

- the majority of plant and animal species are native and no exotic species dominate the system
- natural ecosystem processes are maintained
- major natural habitat features are represented and are maintained over time

Catchment Connections

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- native riparian (riverside) vegetation communities exist for the majority of its length
- native fish and other fauna can migrate up and down the river
- linkages between river and its surrounding floodplain and associated wetlands are maintained
- natural linkages with the sea or terminal lakes are maintained
- associated estuaries and terminal lake systems are functional ecosystems.

(Department of Natural Resources and Environment, 2002: 'Healthy Rivers, Healthy Communities & Regional Growth - Victorian River Health Strategy')

Lesson ideas

- If you were boss of the catchment what would you do? Write a story.
- Look at the *Water: Learning and Living* poster and identify human activities that have an impact on the catchment. Try to work out ways to reduce these impacts. Construct a table on the blackboard and have students suggest answers and then copy the table into their work books.
- Complete the 'caring for our catchment' worksheet
- Pick one of the catchment care categories to research and produce a brochure about it. Choose from revegetation, stream restoration, water conservation, pollution prevention and elimination of feral species.
- What can you do at home to care for the catchment? What can you do at school?

- Write a catchment care song to perform to the school.

Recommended Resources

www.onkaparinga.net "Caring for the Catchment" section

www.healthywaterways.org/filelibrary/FILE2003314183212.pdf - fact sheet