Government of **Western Australia**
Department of **Health**

Recreational Access to Drinking Water Catchments

Water is essential to sustain life. It is easy for us to take the quality of our drinking water for granted – when we turn on the tap, we expect safe, pleasant tasting water to flow out. Our health depends on having an adequate supply of safe water for drinking, cooking, laundry, bathing even brushing our teeth – every day.

The link between our water supply and disease has been recognised for thousands of years. If our water becomes contaminated with microorganisms or chemicals, illness can result. Disease causing microorganisms carried by water are the biggest threat to health, causing gastrointestinal upset, diarrhoea or even death. In some cases people can become ill after drinking contaminated water just once.

As we all depend on clean water every day any problem with our drinking water supply can very quickly have major consequences for the entire community. The condition of the catchment – the area over which rainwater is caught and drains into a dam or reservoir – is probably the most important factor influencing the quality of our drinking water supplies. It determines how much treatment is needed before the water is safe to drink, how much this will cost us and how reliable the supply will be. Water drawn from a pristine natural catchment will be of higher quality and need less treatment than water that has flowed through heavily used or disturbed areas.

Contamination of catchment areas has been recognised as a leading cause of illness around the world by the World Health Organisation, the United States Environmental Protection Agency, American Water Works Association, the Canadian Council of Ministers for the Environment, World Wildlife Fund and the Economic Union.

In Australia the National Water Quality Management Strategy and its guidelines, including the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000, the Australian Drinking Water Guidelines 2004 recognize the importance of catchment management for delivering safe, good quality drinking water.

Strict catchment protection policies were not always followed in Western Australia. In 1892, only a year after the Victoria Reservoir was completed it was recognised that the human activities in the catchment area were a potential source of “infectious disease”. Over the following years 367 residents died of typhoid until the stream feeding the reservoir was diverted in 1897.

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Why Drinking Water Catchments Should be Protected

- **Is water treatment always effective?**
  No. Treatment plants are not 100% reliable. When working properly they only reduce, not remove, contaminants. Being an engineered system they can fail.
- **Can water quality sampling programs detect and identify contamination before you drink the water?**
  No. The time taken to collect, transport, test and analyse samples is often from days to weeks after it is consumed.
- **Is it possible to link the impact of recreational activities to water quality?**
  No. It is not possible to link a type and level of recreational activity to a quantified level of water quality impact. Expert judgement, modelling and scientific inference only provide a, 'best guess estimate'. For example the effect of increased nutrients, chemical pollutants and erosion caused by recreational activities may be delayed by months or years.
- **Are drinking water contamination events rare?**
  Yes. In W.A. there has not been a major drinking water contamination event for over one hundred years. This is due in part to the strict catchment management policies Government has imposed to protect our drinking water supplies. However, around the world many events have occurred causing illness to hundreds and thousands of people and in some cases causing death.
- **What is the cost of a drinking water contamination event?**
  Experience around the world has shown that drinking water contamination events can cost communities millions of dollars. The effect of a contamination event can last for years afterwards from long term illness, loss of public confidence to effecting the development of trade and businesses.
- **Is Catchment Protection a matter of security?**
  Currently Government policy is to restrict access to drinking water catchment areas and to prohibit recreational activities on the water body. To permit access into drinking water catchments increases the security risk to both water quality and supply.
- **Why is it a problem to permit only a small number of passive recreational activities?**
  Different recreational activities generate varying risks to drinking water quality. Some activities may not pose a significant risk at all. However, the associated campsites, vehicle access, rubbish disposal, human wastes and control of inappropriate behavior does pose a real risk to water quality and public health. The decision to permit access to a few will set a precedent for other activities to follow.
- **Isn't a water storage and catchment area a public asset?**
  Water catchments and associated infrastructure such as the catchment area, dam and dam wall are often seen by the community as a public area which should be available to everyone. However, water utilities have a duty of care to provide safe drinking water to the whole community. The actions of a single individual or recreational group can impact upon the whole community.
- **Who pays for the water treatment costs to protect public health?**
  Everyone in the community pays through their water bill the costs associated with treating and protecting our drinking water quality.
- **Is recreating in a catchment area an essential activity?**
  No. However, the community must decide how important it is to protect our drinking water

In reporting on the causes of the Sydney Water Crisis in 1998, Peter McClellan QC explained:

"it is clear that *Cryptosporidium* and *Giardia* are present in significant numbers in Sydney's drinking water catchment. This has been confirmed by independent laboratory work, which I am satisfied is reliable. It is also apparent that there are a number of other significant problems in the catchment. For a variety of reasons, the catchment is seriously compromised. The problems of the catchment demand a strong and effective response. A modern treatment plant is not a substitute for proper catchment management. Protecting the catchment provides the best longterm protection for Sydney's drinking water."

P McClellan QC, Sydney Water Inquiry, 1998, Executive Summary of Third Report, ch 1.

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