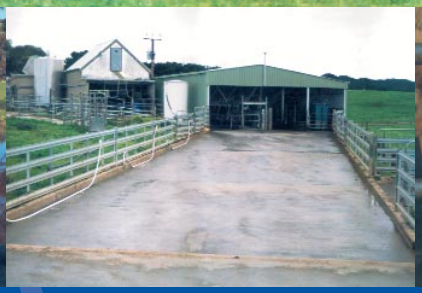
E N V I R O N M E N T P R O T E C T I O N A U T H O R I T Y



Milking Shed Effluent Management in the Mount Lofty Ranges Watershed

A report on the audits conducted during 2000-2002

Mount Lofty Ranges Watershed Protection Office

Government of South Australia

South Australia

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GLOSSARY

environment protection order—a written notice issued under the *Environment Protection Act 1993* to secure compliance with a requirement imposed by or under that Act.

expiation notice—an on-the-spot fine issued under the *Expiation of Offences Act 1996* to a person alleged to have committed an offence for which an expiation fee is fixed under an Act, regulation or by-law.

general environmental duty—as described in the *Environment Protection Act 1993*, 'a person must not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm'.

mandatory provision—compliance with the provision is obligatory and its contravention is an offence under the *Environment Protection Act 1993.*

milking shed—as described in the *Environment Protection (Milking Shed Effluent Management) Policy 1997*, 'any structure, whether roofed or not, at which operations for the milking of animals are carried on, including any associated yard areas at which the animals are confined prior to or following milking'.

milking shed effluent management system—as described in the *Environment Protection (Milking Shed Effluent Management) Policy 1997*, 'a system that is designed and operated:

- for the purpose of collecting milking shed effluent and disposing of it to land or storing milking shed effluent and subjecting it to evaporation in a lagoon or some other treatment process; and
- so as to minimise any adverse impacts on the environment'.

milking shed wastewater (effluent)—as described in the *Environment Protection (Milking Shed Effluent Management) Policy 1997*, 'manure, urine, washdown water or contaminated runoff from milking shed operations, and includes components of such matter produced by storage and evaporation in a lagoon or some other treatment process, but does not include natural runoff from stock races'.

Mount Lofty Ranges Watershed—the area prescribed under the *Water Resources Regulations 1997*. Surface waters within this area are captured in reservoirs for the supply of drinking water to the city of Adelaide or flow into an area in which a reservoir may be constructed in the future.

stormwater—rain that runs off building roofs and hard paved surfaces.

water protection area—an area proclaimed under the *Environment Protection Act 1993* to be a water protection area for locally and regionally significant surface and underground water resources.

SUMMARY

This report outlines the methods and findings of a comprehensive audit conducted by the Environment Protection Authority (EPA) of effluent management practices at 104 milking sheds operated in the Mount Lofty Ranges Watershed (the watershed) during the 2000–2002 period. The audit was conducted to review and enforce compliance with the *Environment Protection (Milking Shed Effluent Management) Policy 1997* (the Policy) within the region. The report identifies:

- the level of compliance with the Policy when initial visits were undertaken
- the action taken by the EPA to enforce compliance
- the types of effluent management systems in use
- a range of environmental management issues observed during the audit.

The report makes a number of conclusions about the value of the environmental auditing process and the need for it to be continued in some form.

In summary, the report recommends:

- a review of interstate milking shed effluent management policies, practices, and standards to assist in determining best practice environmental management for South Australia
- modification of the *Code of Practice for Milking Shed Effluent 2003* to incorporate current best practice environmental management for milking shed effluent, particularly for the operation of milking sheds in water protection areas
- promotion of the concept of milking shed effluent management as a part of holistic farm management, including consideration of future dairy farm expansion
- promotion of systems for the storage of milking shed effluent during winter months as a preferred management system in the Mount Lofty Ranges Watershed
- the phased introduction of compulsory milking shed effluent storage during winter months in the Mount Lofty Ranges Watershed through the *Code of Practice for Milking Shed Effluent 2003*
- improved coordination between government and non-government agencies to provide assistance and advice on milking shed effluent management to dairy farmers within South Australia
- assessment of the requirements for milking shed effluent management common to government and industry bodies to develop a commonly agreed accreditation system
- review and update of the *Guidelines for the Management of Milking Shed Wastewater and Intensive Stock Use Areas on Dairy Farms in the Mount Lofty Ranges* and conduct of an associated extension and demonstration program
- the need for, and feasibility of, providing financial assistance to dairy farmers for the upgrade of milking shed effluent management systems within the Mount Lofty Ranges Watershed be assessed
- continuation of audits by the EPA of milking shed effluent management within the Mount Lofty Ranges Watershed, using a water quality risk scoring system to determine each milking shed's priority in the audit program

- development by the EPA of a water quality risk scoring system that can be applied to each milking shed within the Mount Lofty Ranges Watershed so as to determine its priority in the milking shed effluent management audit program

- promotion of the need for a back-up milking shed effluent management system in case the primary system fails after the introduction of the *Code of Practice for Milking Shed Effluent 2003*

- incorporating assessment of the size of milking shed yards and management of stock races into the milking shed effluent management audit

- promotion of improved management of rainfall runoff from milking shed roofs by using it beneficially and/or separating it from the milking shed effluent management system

- incorporating management of stormwater from milking shed yards into the review of best practice environmental management for milking shed effluent management

- promotion of the findings, conclusions, and recommendations of this report to stakeholders, including dairy farmers and dairy industry representatives, relevant government agencies, and natural resource management organisations in the Mount Lofty Ranges Watershed.

Plate 1 *The water that flows into watercourses within the Mount Lofty Ranges Watershed is an essential part of Adelaide's drinking water supply.*