



## Reclaimed Water Use on Dairy Farms

Reclaimed water is water that has been derived from sewerage systems or industry processes and treated to a standard appropriate for its intended use.<sup>1</sup> This Dairy Food Safety Note addresses the food safety requirements and good management practices in the use of reclaimed water on Victorian dairy farms.

There are two main potential food safety risks associated with the use of reclaimed water, these include:

- Chemical contaminants; and
- Microbial pathogens.

If chemical contaminants are present in reclaimed water they can potentially be carried through into the milk. However, the likelihood of this occurring is minimal since several management practices are in place. For example, the supplier of the reclaimed water has a responsibility to ensure that the water arriving at the dairy farm is of a quality that is fit for its intended purpose. Hence, the water supplier must ensure the water meets acceptable limits for chemical and microbiological contaminants. Also, the Environment Protection Authority (EPA) Victoria has verification processes in place to ensure the water supplier and the user are meeting the EPA Victoria guidelines.

The likelihood of the transfer of pathogens from reclaimed water into the milk supply is very low. There are various treatment processes that the reclaimed water supplier undertakes to reduce the number of pathogens in the water. Some examples of these treatment processes include filtration, secondary sedimentation and disinfection. In addition, current Victorian food legislation requires that all milk and dairy food used for human consumption undergo a validated pasteurisation process. Pasteurisation is designed to eliminate any pathogens present in the raw milk through the application of a heat treatment process.

The supply and use of reclaimed water on Victorian dairy farms must conform to EPA Victoria's *Guidelines for Environmental Management (GEM): Use of Reclaimed Water*.

The EPA Victoria guidelines do not allow reclaimed water to be used as wash-down water for dairy milking machinery, food processing machinery or food packaging machinery.



The EPA Victoria guidelines grade reclaimed water into four categories: A, B, C and D, where grade A has the highest quality. For each of the water grades there are restrictions for use that are outlined below.

### Grade A

- Unrestricted\* (\* the restriction 'cannot be used as wash-down water for dairy milking machinery, food processing machinery or food packaging machinery' still applies).

### Grade B

- Following irrigation onto pasture (regardless of the method) dairy stock are to be withheld from the pasture and fodder for 4 hours or until dry.
- The reclaimed water storage and/or irrigation system is not to be accessible to stock.
- The reclaimed water storage area is to be constructed and managed to prevent overflow.

### Grade C

- Following irrigation onto pasture (regardless of the method) dairy stock are to be withheld from the pasture and fodder for a minimum of 5 days.
- The reclaimed water storage and/or irrigation system is not to be accessible to stock.
- The reclaimed water storage area is to be constructed and managed to prevent overflow.
- Grade C reclaimed water is not suitable for livestock drinking.
- Grade C reclaimed water is not suitable for use as wash-down water in dairy sheds.

### Grade D

- Grade D reclaimed water must not be used on dairy farms.

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As well as complying with the good management practices outlined in the EPA Victoria guidelines, it is important for the dairy farm to have a formal agreement with the reclaimed water supplier. The agreement should be regularly reviewed and incorporated into the dairy farm's food safety program. Corrective and preventative action should be taken to treat any non-conformances in relation to the supply as well as on-farm water management practices.

In addition, the dairy farmer should notify the 'DFS V appointed farm food safety auditor' and the company to which milk is supplied of their intention to start using reclaimed water on the farm.

For more detailed guidance on agriculture use of reclaimed water refer to the EPA Victoria guidelines or contact DFS V.

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### References

1. Environment Protection Authority (EPA) Victoria (June 2003) 'Guidelines for

Environmental Management: Use of Reclaimed water, EPA Publication 464.2'.

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### Further information

Guidelines for Environmental Management: Use of Reclaimed water, EPA Publication 464.2 (June 2003). Available at: [www.epa.vic.gov.au/Water/Industry/](http://www.epa.vic.gov.au/Water/Industry/)

Agriculture Note AG1089: Reclaimed water – use in cattle production. Available at: [www.dpi.vic.gov.au/notes/](http://www.dpi.vic.gov.au/notes/)

Agriculture Note AG1090: Reclaimed water – use in livestock production. Available at: [www.dpi.vic.gov.au/notes/](http://www.dpi.vic.gov.au/notes/)

For further food safety information, please contact:

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