

## Dairy effluent management systems

### Guidelines and checklist for local governments

#### Introduction

This document and checklist aim to assist local governments assessing development applications for proposed new, or upgrades to existing, dairy farms and associated effluent management systems.

Local governments play an important role in supporting sustainable agricultural development in their regions, while ensuring that new or upgraded dairy farms meet community, environmental and industry standards and expectations.

New dairies or upgrades to existing dairies that increase the capacity or intensity of the land use should only be supported where it can be demonstrated that dairy effluent will be managed in a manner that does not discharge to groundwater or surface water, or create nuisance odours or impacts off farm.

Using the checklist during the planning process, at the development application phase, will ensure the effluent management system is carefully planned.

Development applications to upgrade older or existing systems to improve effluent management practices should generally be supported.<sup>1</sup>

This checklist helps assessing officers ensure proposals meet the standards set out in the *Code of Practice for Dairy Farm Effluent Management WA* (the Code). The Code was published by Western Dairy in 2021 and demonstrates the industry's commitment to reducing the environmental impact of dairy farm effluent.<sup>2</sup>

To access a copy of the Code of Practice and supporting information, visit <https://estuaries.dwer.wa.gov.au/dairy>.

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<sup>1</sup> This is on the basis that there will be an improvement, even if the proposal does not result in an improvement against all of the standards outlined in the Code of Practice.

<sup>2</sup> The Code was developed with input from and supported by a Working Group that comprised Western Dairy, Department of Water and Environmental Regulation, Department of Primary Industries and Regional Development, WA dairy farmer representatives, and Agriculture Victoria.

## Effluent Management Plans

Development applications should be accompanied by an effluent management plan that supports the proposed works and has been developed by a nationally accredited effluent system designer.<sup>3</sup>

The system designer should ensure that the effluent management plan is developed to address the standards in the Code of Practice relevant to the proposed upgrade, or for new systems, all standards that can be met.

## Effluent System Reviews

Existing dairy effluent management systems can also have an on-site assessment completed to see how well the current system meets the Code. A traffic light set of results are provided in a report for the farmer, with general observations and recommended actions to address the standards in the Code of Practice.

Proposals that relate to existing dairy effluent management systems should be accompanied by a recent effluent system review report, prepared by a nationally accredited effluent system designer. This is to help local government identify any recommendations that were given for the current system, and whether these have been included in the development application and effluent management plan.

## Considerations for more intensive dairy developments

In contained dairy systems, such as freestalls or loose housing systems, cows spend more time in a concentrated area which means more effluent is collected and needs to be treated, stored, and redistributed. In particular, the area needed to redistribute effluent to meet target nutrient application rates increases substantially.

Therefore, when local government officers are reviewing a development application for a contained dairy system, particular focus should be placed on the following standards, and the relevant sections in the effluent management plan and checklist:

- Standard 2 Solids and Stockpile Management
- Standard 4 Storage of Effluent
- Standard 5 Reuse of Dairy Effluent

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<sup>3</sup> For a list of designers who have completed the nationally accredited Agriculture Victoria training Design Livestock Effluent Systems (Unit AHCLSK 506A), visit <https://agriculture.vic.gov.au/livestock-and-animals/dairy/managing-effluent/effluent-system-designers>.

## Site Specific Issues

The location of individual dairy farms and environmental characteristics may mean that not all effluent systems will fully meet the Code of Practice. In such cases, the effluent management plan should document management strategies that minimise the risk of dairy effluent and nutrients being discharged to the environment.

An example is provided below:

<b>Issue:</b>	Proposed pond does not meet the 100m recommended buffer distance from waterways.
<b>Standard:</b>	Storage facilities are to be located a minimum of 100m from waterways, wetlands and other sensitive water resources.
<b>Reason standard not met:</b>	No reasonable alternative site for the pond.
<b>Hazard:</b>	The northern edge of the proposed pond is 80m from the seasonal drain to the north.
<b>Risk management:</b>	<ol style="list-style-type: none"><li>1. Install an effluent reuse application system and manage pond storage volume to avoid overflow events.</li><li>2. Ensure the new pond is constructed with a suitable clay or synthetic liner.</li><li>3. The liquid effluent storage pond has an extra 1ML capacity above that recommended by the Effluent Toolkit 1.3.3 to reduce the risk of overflow.</li></ol>

## How to use the Checklist

A blank checklist template is provided in **Appendix 1**, with a completed example provided below.

The colour of each standard in the checklist corresponds to section tabs in the Code of Practice, which is available at <https://estuaries.dwer.wa.gov.au/dairy> or hardcopy from Western Dairy or the Department of Water and Environmental Regulation.

Local governments should request that development applications for proposed new or upgraded effluent systems are accompanied by a completed checklist, an effluent management plan, and a recent effluent system review report (where relevant).

Local government officers can then use the completed checklist as a guide by cross-referencing with the effluent management plan and effluent system review report (where relevant), to make sure the proposal adequately addresses the standards in the Code of Practice.



## Dairy Effluent Development Application Checklist Example

**Farm details:** Fresh Milk Farms

**Document reference:** Fresh Milk Farms Effluent Management Plan 2022

**Development scope:** New shed using some existing effluent infrastructure and also new designs for yard wash, solids treatment and solids storage.

Code of Practice Standard	Effluent Management Plan Reference	Status	Effluent Management Plan Recommendations	Comments
1. Water Use Efficiency	Section 7 Page 11 Section 9.1 Page 15	Design Phase	Install Recycled Flood Wash System	Part of new shed design
2. Solids and Stockpile Management  2A. Solids are managed to optimise handling and re-use  2B. Solids are stored in a manner that does not impact on ground water	Section 9.2, 9.3, 9.4 Pages 15-20	Design Phase	Install New TST and Solids Storage Pad  Clean out existing solids pond annually	Part of new shed design
3. Laneways & Crossings	Section 15 Page 28	Meets Code		
4. Storage of Effluent  4A. Effluent is stored in a manner that minimises impact to surface and groundwater and people  4B. Effluent is stored over periods when soils are saturated and/or precipitation exceeds evaporation	Section 9.5 Page 21	Meets Code	Drawdown storage pond volume by 31 March annually	Existing infrastructure is adequate
5. Re-using Effluent	Section 9.6, 9.7 and Section 10 Pages 21-25	Meets Code	Soil and effluent testing  Apply effluent over minimum 25.5 ha	Existing infrastructure is adequate
6. Effluent Management Plan		Meets Code		Updated Nov 2022
7. Monitoring & Maintenance	Section 11-13 Pages 26-28	Meets Code		
Site Selection & Setbacks	Section 8.2, 8.4 page 13	Meets Code		
Site Specific Issues	N/A	N/A	N/A	N/A

\* Colour coded as per the section tabs on the Code of Practice

## Appendix 1 Dairy Effluent Development Application Checklist

**Farm Details:**

**Document reference:**

**Development scope:**

Code of Practice Standard	Effluent Management Plan Reference	Current Status	Effluent Management Plan Recommendations	Comments
1. Water Use Efficiency				
2. Solids and Stockpile Management  2A. Solids are managed to optimise handling and re-use  2B. Solids are stored in a manner that does not impact on ground water				
3. Laneways & Crossings				
4. Storage of Effluent  4A. Effluent is stored in a manner that minimises impact to surface and groundwater and people  4B. Effluent is stored over periods when soils are saturated and/or precipitation exceeds evaporation				
5. Re-using Effluent				
6. Effluent Management Plan				
7. Monitoring & Maintenance				
Site Selection & Setbacks				
Site Specific Issues				

For local government office use only:

- Effluent management plan provided
- Effluent management plan prepared by accredited effluent system designer
- For sites with existing effluent systems, recent effluent system review report provided
- Recent effluent system review report prepared by accredited effluent system designer