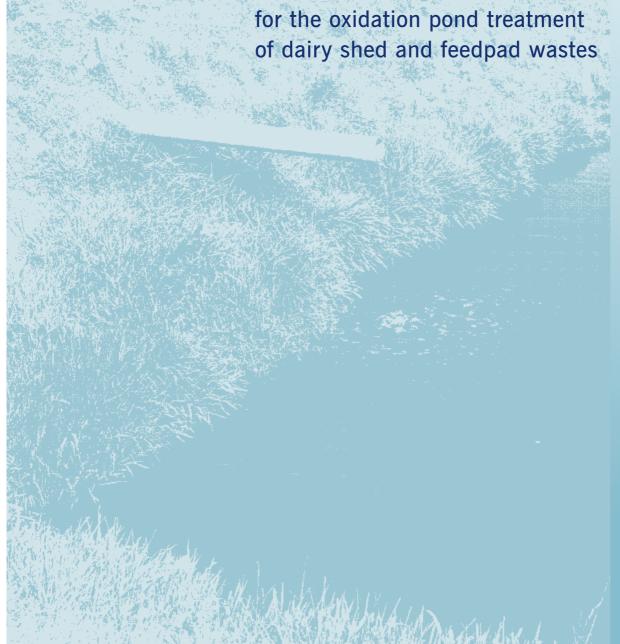
DESIGN, CONSTRUCTION AND MAINTENANCE GUIDELINES











IMPORTANT The material in this booklet must not be considered as a set of rules that will be applied universally. The Taranaki Regional Council will consider each individual situation on its merits and circumstances and take into account the level of environmental protection that is appropriate in that situation.

Before a system is installed, farmers are advised to consult with their dairy company and district council regarding any additional rules which they have.

Table of contents

Introduction	2
Oxidation pond treatment system	3
Anaerobic pond	3
Aerobic pond(s)	3
Tertiary treatment	3
Design of the pond system	4
Position of the pond system	4
Pond size	4
Stormwater diversion	4
Recommended anaerobic pond size	5
Recommended aerobic pond size	5
Construction of the pond system	6
Shape	6
Site preparation	6
Compaction	6
Machinery	6
Bank gradients	6
Freeboard	6
Fencing	6
Sandtrap	6
Pipes	7
Baffles	7
Overflow contingency	7
Pond management	7
Consent conditions	7
Performance testing	7
Pond maintenance	8
Regular maintenance	8
Compliance monitoring	8

Introduction

It has long been recognised within Taranaki that the impact of over 2000 dairy farms on water quality can be significant, particularly the impact of discharges from the farm dairies. Significant gains have been made by the farming community over the past twenty years to upgrade and license dairyshed discharge systems. Improvements to systems and reduced environmental effects have also been made through the implementation of the Regional Fresh Water Plan for Taranaki which governs these discharges. Under this plan, any discharge of dairy effluent, be it to water or to land, requires a resource consent.

The benefits of having a resource consent are:

- it ensures that the farmer is complying with the legal requirements of the Resource Management
 Act 1991.
- it is a condition of supplying milk to Fonterra;
- it protects the quality of watercourses by setting standards on discharges and therefore ensures that water is safe for stock to drink, and for use downstream by other farmers, fishers, industrial users etc;
- it ensures that your disposal system is in the right place and is managed efficiently. This should eliminate future financial, legal and management complications.

The Council has found over the years that to control the incidence of pollution, formal approval for each individual disposal system should be given, together with written standards for that particular site.

The main types of systems used in Taranaki are:

- oxidation ponds
- pump and irrigation
- honey wagon
- holding pond/contractors

The Council has no preference for any particular system, but considers its suitability on an individual farm basis.

This booklet sets out the Council's guidelines for the design, construction and maintenance of an effective oxidation pond system for dairy shed wastes. A separate guideline addresses land based disposal systems.

Recent moves to incorporate feed pads, either for mother liquor or maize, have affected the performance of oxidation pond systems in the region and are treated on a case by case basis.

The Council's riparian management programme (fencing and planting streambanks) is also assisting farmers in addressing the effects of agricultural runoff to waterways and excluding stock from waterways.

If you require advice or assistance with regard to anything in this booklet or other treatment systems, or on resource consents, please do not hesitate to contact:

Inspectorate Section
Taranaki Regional Council
Private Bag 713, Stratford
Ph: 06 765 7127
or 0800 736 222

Email: info@trc.govt.nz

