

WATER MANAGEMENT POLICY

On Farm Storage

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CONTENTS

PURPOSE OF POLICY	1
APPLICATION.....	1
DEFINITIONS.....	1
POLICY	2
1.1 Introduction	2
1.2 Policy Requirements	2
1.2.1 General.....	2
1.2.2 Consents.....	3
1.2.3 Design.....	3
1.2.4 Operational	3
1.2.5 Commercial	3
1.2.6 Approvals	4
1.3 Review of Policy	4
ATTACHMENTS.....	4
1. Application for Approval Form.....	4

PURPOSE OF POLICY

This policy describes the conditions that apply when individual shareholders/irrigators wish to develop water storage facilities on their farm for storage of water supplied by Opuha Water Ltd (OWL).

The purpose of the policy is to protect the interests of all OWL shareholders by ensuring that the development of an on-farm storage facility does not adversely impact on the reliability of the OWL scheme or its shareholders.

A key objective of the policy is to maximise the potential benefit available through the coordinated development of on-farm storage facilities within the Opuha scheme.

APPLICATION

This policy applies to all OWL shareholders and irrigators. For any on-farm storage commissioned after 1st July 2014, the policy applies in its entirety. For on-farm storages already in place on 1st July 2014, the policy will be applied as is deemed reasonable and appropriate by the Board, in order to achieve, as far as is reasonable, the purpose of this policy.

This policy is intended to be consistent with the terms and conditions of the Water Supply Agreement that applies to all OWL shareholders.

DEFINITIONS

<i>Buffer Pond</i>	A pond storing less than 10 days of water.
<i>Storage Pond</i>	A pond storing more than 10 days of water or more than 50,000m ³
<i>10 days of water</i>	The normal volume of water an irrigator is entitled to receive over a period of ten days based on the water shares held. The calculation is: No. of water shares available x 357.14 (result in cubic metres, m ³)
<i>Water Supply Agreement</i>	OWL's formal agreement for supply of water, covered by two documents – Short Form Water Agreement and Terms & Provisions for Supply of Water
<i>80% entitlement</i>	The annual charge for water to OWL shareholders provides for up to 80% of the annual volumetric entitlement per share per season. The annual entitlement per share is 5,625m ³ and 80% is therefore 4,500m ³ per season. Under the Water Supply Agreement, any water used above the 80% entitlement attracts additional water charges which are set by OWL.
<i>Ordered Water</i>	Water ordered by the farmer under OWL's normal water ordering regime.
<i>Surplus Water</i>	Water in the distribution system above that required to maintain minimum river flows and that, if abstracted, will not adversely impact on lake storage objectives or Saleyards Bridge minimum flow

requirements. Generally only available when releases from the dam are not being made specifically to maintain the minimum flow at the Saleyards Bridge monitoring site. The amount and any availability of Surplus Water is determined at the sole discretion of OWL.

POLICY

1.1 Introduction

An on-farm storage facility enables an irrigating farmer to draw water from the Opuha scheme independent of using the water for irrigation. There are three main operational advantages to the irrigating farmer, namely:

- Water can be drawn from the scheme continuously while irrigation can be intermittent due to planned or unplanned stoppages. This means that, on average, the farmer with a pond is able to access and use more water over a given period than if the water was used directly for irrigation. This does not mean, however, that the farmer is permitted to access more than their shared entitlement.
- There can be better on-farm efficiency of water use because the farmer has more discretion and flexibility in the timing and rate of irrigation application
- During periods of restriction, the pond volume can provide an initial buffering to the water restrictions for the farmer

On-farm storage can also provide operational advantages at a scheme level, including:

- A constant, steady draw-off of water is much easier and efficient to provide through the Opuha scheme. It enables a higher 'lake to land' transfer by reducing the losses associated with start-up, shut down and ramping of irrigation takes from the scheme
- When there are short term periods of *Surplus Water* flows within the scheme, and as long as sufficient on-farm storage volume is available at the right time, some of the *Surplus Water* may be able to be diverted to the farm pond and thus reduce the need for subsequent release of stored water from the dam for irrigation on that farm. This includes the season startup, where ponds that are filled pre-season will reduce the early season demand for release of stored water from the Opuha dam.

To be able to realise this important scheme level benefit, there needs to be an effective operational interface between OWL and the pond operator such that OWL can determine and advise the pond operator when *Surplus Water* is available to be transferred to the pond.

This policy has been produced to ensure that the benefits of on-farm storage for both the farmer and the overall scheme (and therefore all OWL shareholders) can be best realised. This includes a commercial incentive for pond owners to be able to take *Surplus Water* when it is available.

1.2 Policy Requirements

1.2.1 General

1. Utilisation of scheme water in on-farm *Storage* and *Buffer Ponds* requires approval by the OWL Board and will be subject to a specific agreement between the company and the water user.

2. All agreements to utilise water in an on-farm pond are subject to future regulatory changes that may require scheme variations or consent changes for either party.
3. OWL does not warrant to supply any water beyond the existing conditions of a shareholder's Water Supply Agreement.
4. OWL retains the right to construct its own water storage. In this event, OWL may prioritise water to be retained in the lake, river or other shared systems.
5. Nothing in this policy or approval given by OWL to a pond owner implies any warranty on the part of OWL in relation to on-farm water storage including the construction of operating of the ponds.

1.2.2 Consents

1. All necessary resource consents must be obtained by the pond owner and a copy provided to OWL prior to any water being delivered to a water storage pond.
2. To minimise demand during the irrigation season and increase reliability for all users, all new consents must have the ability for ponds to be filled during the non-irrigation season and, as far as is practicable, existing consents will be amended for this purpose within two years.

1.2.3 Design

1. All water taken into the pond must be metered. The following data must be recorded and available to OWL via telemetry with capability for data update at least hourly:
 - flow rate into the pond
 - volume of water stored
2. No liability will be conferred on OWL for design, construction or integrity of a privately owned on-farm pond.

1.2.4 Operational

1. Where practicable, ponds will be filled prior to and ready for the start of the irrigation season under direction from OWL (1 Oct or such other date designated by OWL)
2. Pond owners are required to comply with the normal water ordering requirements specified by OWL
3. The allocation of any *Surplus Water to Storage or Buffer Ponds* is at the sole discretion of OWL.
4. Pond owners will use best endeavours to take *Surplus Water* when requested by OWL
5. All water supplied to the pond will be identified as *Ordered or Surplus Water*

1.2.5 Commercial

1. If the total water supplied to the pond (*Ordered and Surplus Water*) exceeds the *80% entitlement* based on shareholding, any volume above the *80% entitlement*, up to 100% entitlement, that has been supplied as *Surplus Water* will be charged at 75% of the applicable cost set by OWL for water above *80% entitlement*.
2. Normal charges, as set by OWL, will apply to all *Ordered Water* supplied above *80% entitlement*.
3. Approval for water in excess of 100% of shared entitlement to be supplied in any season to a pond will be subject to Board approval and will be charged at a rate specified in the agreement with the pond owner.

1.2.6 Approvals

1. An Application for On-Farm Storage is required to be completed by the prospective pond owner and submitted to OWL for Board approval. An application form is available from the OWL office or website.
2. *Buffer Ponds* (< 10 days storage) are required to meet the Consent, Design and Operational requirements of this policy to be deemed compliant.
3. *Storage Ponds* (>10 days storage) have the additional requirement that scheme benefits, beyond the individual pond owner's interests, must be able to be demonstrated. Unless such benefits are evident, approval may be denied and cannot be relied upon.

1.3 Review of Policy

This policy will be reviewed at least three yearly.

ATTACHMENTS

1. Application for Approval Form

ON-FARM WATER STORAGE POND - APPLICATION FOR APPROVAL

Shareholder Name: _____

Farm Name: _____

Details of Proposed Pond Installation:

(please use space overleaf if required to provide additional information or attach separately; refer table overleaf for Notes for Applicant)

General Information		Notes
a	Pond Location	1
b	Water Source	2
c	Water Take Location	3
d	Water Take Type	4
e	Pond Storage Capacity (m ³)	
f	Pond Intake Capacity (l/s)	
g	Intake water meter type	
h	Intake water meter location	
i	Meter Data service provider	
j	Spillway/Overflow location	5
k	Pond Lining Type	6
l	Construction Contractor	
m	Resource Consent No(s).	7

Operational Information

n	Pond working depth (m)	
o	Working volume (m ³)	
p	Spillway level (m)	
q	Pond intake/level control method	8
r	Is intake flow rate and pond level/volume telemetered and available to OWL? _____	9

I have read and understand the OWL Water Management Policy – On Farm Storage and agree to comply with the Policy:

Shareholder/Irrigator: _____

Date: _____

Pond Installation approved by Opuha Water Ltd:

OWL Management: _____

Date: _____

Assessment by Opuha Water Ltd (OWL)

The pond proposal will be assessed by OWL to confirm that it complies with the relevant policies.

OWL will also evaluate the opportunity to integrate the operation of the pond with the distribution of water by the company to enhance the overall value of the pond to the owner and to the company.

A variety of factors will determine the practicality and extent to which the operation of the pond will be able to be integrated and thus provide additional benefits.

These factors include:

- Physical location within the overall Opuha scheme
- Pond volume and normal working range
- Extent of hydraulic connection to the adjacent river (how immediate the effects of drawing water for the pond is realised in the river flow downstream)
- Level of proposed automation
- Capacity of the pond supply infrastructure

Summary of Assessment by OWL: