

Disclaimer: This document refers to Proposed Plan Change 5 to the Land and Water Regional Plan (Nutrient Management and Waitaki). All aspects of this Plan Change are currently under appeal. The final form of Plan Change 5 will not be known until all appeals are resolved.

Memo

Date	25 September 2017
To	OTOP Zone Committee
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Options for Managing Industrial Discharges in the Orari, Temuka, Opihi and Pareora Freshwater Management Units

PURPOSE:

The purpose of this paper is to inform the Orari, Temuka, Opihi and Pareora (OTOP) Zone Committee (ZC) on:

- a. The current regulatory framework in the Land and Water Regional Plan (LWRP) for industrial discharges in the OTOP Zone;
- b. Options for targeted management of industrial wastewater discharges specific to the Freshwater Management Units (FMUs) in the OTOP zone.
- c. The key decisions required for industrial discharge management in the OTOP Zone.

BACKGROUND

Industrial discharges are undefined in the LWRP, but in Rule 5.91 there is a description of 'industrial and trade wastes' as follows: *"any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater"*. Industrial or trade premises are defined under the Resource Management Act 1991 (RMA) as:

- a. *any premises used for any industrial or trade purposes; or*
- b. *any premises used for the storage, transfer, treatment, or disposal of waste materials or for other waste-management purposes, or used for composting organic materials; or*
- c. *any other premises from which a contaminant is discharged in connection with any industrial or trade process;*

but does not include any production land

There are a number of industrial discharges occurring in the OTOP Zone. Loe (2012) outlines the industrial discharges occurring in the Orari, Pareora, Temuka and Timaru Freshwater Management Units (FMUs) and quantifies their associated nitrogen load. In summary, in the Orari FMU, there are

six consented discharges from Fonterra's Clondeboye milk processing plant with a nitrogen load of 798 tons per year. There is one other consented industrial discharge to land with a nitrogen load of 12 tons per year for a total of 810 tons per year for the Orari FMU.

In the Pareora FMU, there is one consented discharge from Silverfern Farm's meat processing plant with a total nitrogen load of 57 tons per year.

In the Timaru and Temuka FMUs, there are two other consented industrial discharges to land with nitrogen loads of 1.22 and 1.83 tons per year respectively. Loe 2012 does not estimate the nitrogen load from one remaining discharge in the Timaru FMU from the Ravensdown fertiliser storage facility at Seadown. Ravensdown hold a consent to discharge storm water to land which includes nitrogen from the storage facility. The nitrogen component of this discharge should be included in the industrial load limit for the Timaru FMU. Further work will be undertaken to quantify the amount of nitrogen in this discharge.

These discharges are subject to the industrial or trade wastes discharge rules in the LWRP. This framework is outlined below. Where part of an industrial discharge is onto any production land and is an input to a farming activity, that discharge must be accommodated within that property's nitrogen limits (Nitrogen Baseline or Baseline GMP Loss Rate).

Current Management of Industrial Discharges:

As these discharges contain large amounts of nitrogen, the Nutrient Allocation Zones (NAZs) in the LWRP play a part in controlling these discharges. In Green NAZs, small volumes are permitted to be discharged provided setbacks from surface water bodies, and community drinking water supply protection zones are adhered to. In Orange and Red NAZs, these discharges are subject to the resource consent framework, and are considered against the region wide freshwater outcomes and water quality limits. As specific freshwater outcomes and limits will be set through this process, regulation for managing nitrogen in industrial discharges must be introduced to the OTOP Zone to achieve these outcomes. Options for managing these discharges in the OTOP Zone are outlined below.

Options for Managing Industrial Discharges in the OTOP Zone:

Industrial discharges must be regulated to ensure the freshwater outcomes and limits being set through this process will be achieved. Options include:

- a. Setting a nitrogen limit for industrial discharges;
- b. Requiring the Best Practicable Option (BPO) to be adopted for the treatment and disposal of industrial discharges;

Setting a Limit for Industrial Discharges

An industrial load limit must be set to ensure freshwater limits in the OTOP Zone can be met. An industrial load limit essentially places a limit on industrial discharges the same way that the Nitrogen Baseline concept places a limit on a property for a farming activity. A limit provides certainty for

existing operators in terms of future growth and recognises existing investment. It also provides a framework for the renewal of existing consents in the future, provided the discharge is within the industrial load limit.

In the absence of an industrial load limit, any new or renewal of an existing discharge permit would be considered against the freshwater limits set through this process. This approach is appropriate for new discharges, but it does not recognise the investment of lawfully established discharges on renewal of consent. An industrial load limit is a tool that can be used to cap industrial discharges, prevent further industrial discharges beyond the limit, and can be used to reduce industrial discharge contaminants over time. Options for setting an industrial load include:

- a. **Option 1:** Setting it at the sum of current lawfully established industrial discharges; and
- b. **Option 2:** Setting it at the sum of current lawfully established industrial discharges, with reductions over time.

Option 1:

In catchments where freshwater quality outcomes and limits are, or will be, met this option could be appropriate for setting an industrial load limit. It provides certainty, and recognises existing investment and planned industrial growth. It could be set based on the sum of all currently consented industrial discharges. However, there is a risk of a perceived inequity between the agricultural sector and the industrial sector as it isolates the reduction of nitrogen losses to the agricultural sector. This can be overcome by requiring the adoption of the Best Practicable Option.

Option 2:

In catchments where freshwater outcomes and limits are currently not being met, this option may be appropriate as it recognises current existing investment, and enables the reduction of nitrogen losses to be shared between industries. However, this is a risk with this option that it does not provide for planned growth where a consented discharge is not currently being exercised to its full extent. This may be able to be overcome by requiring the adoption of the Best Practicable Option which could provide some flexibility for expansion within this limit.

Best Practicable Option:

Requiring existing operators to adopt the best practicable option for the treatment and disposal of discharges is required on renewal of resource consent. It can be used as a tool to reduce nitrogen losses, and provide flexibility for industrial growth within an industrial load limit. It also requires industry activities to operate at good practice and would mean that the obligations placed on industrial activities is similar to agricultural activities.

Key Decision Areas:

1. Should industrial load nitrogen limits be set in the OTOP Zone? If so, is Option 1 or Option 2 preferred?

Option 1: This option may be suitable in the Pareora FMU as water quality outcomes are currently being met, and will continue to be met through the implementation of Plan Change 5 (PC5) to the LWRP. It also recognises the existing investment of Silverfern Farms meat processing plant, and will provide for planned growth provided it is within the nitrogen load limit.

In the Timaru, and Temuka FMUs, the nitrogen loads in the industrial discharges are small in contrast with the other FMUs (1.22 and 1.83 tons per year respectively). Option 1 may be suitable to recognise the existing investment and prevent further industrial discharges. The additional nitrogen loading from the Ravensdown Storage Facility should be included in this load.

Option 2: This option may be suitable in the Orari FMU as water quality outcomes are not currently being met. It recognises the existing investment and will mean that the obligation of reduction of nitrogen losses to achieve water quality outcomes is shared between industries. There is a risk that this option does not allow for planned growth with this option.

2. Should the OTOP plan change direct that the Best Practicable Option for industrial discharges be required on renewal of existing industrial discharge consents?

On renewal of consent, the existing operators should demonstrate they are disposing of the discharge using the best practicable option to reduce nitrogen losses. This requirement can be reinforced through the direction of the OTOP plan change.

REFERENCES:

Resource Management Act 1991

Canterbury Land and Water Regional Plan 2017

Loe, B., Clarke, C. (2012). Estimating nitrogen and phosphorus contributions from authorised discharges in five Freshwater Management Units. A report for Environment Canterbury.