OTAGO REGIONAL COUNCIL
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IN THE ENVIRONMENT COURT

IN THE MATTER	of the Resource Management Act 1991
BETWEEN	**FEDERATED FARMERS OF NZ**
	Appellant
AND	**OTAGO REGIONAL COUNCIL**
	Respondent

Form 7

NOTICE OF APPEAL TO ENVIRONMENT COURT AGAINST DECISIONS ON PROPOSED PLAN CHANGE 6A (Water Quality) TO THE REGIONAL PLAN: WATER for OTAGO

Clause 14(1) of First Schedule, Resource Management Act 1991

Federated Farmers of New Zealand

To: The Registrar
Environment Court
P O Box 2069
Christchurch 8013

This Notice is made upon the following grounds:

1. Federated Farmers of New Zealand (Federated Farmers) makes this appeal in respect to the decision to which this reference relates, that being Proposed Plan Change 6A to the Regional Plan: Water for Otago.

2. Federated Farmers made submissions and further submissions and presented evidence to the hearing on that proposed plan.

3. Federated Farmers represents approximately 1200 individual landowners throughout the Otago region. A large number of members of Federated Farmers made individual submissions to the proposed plan change.

4. The Otago Regional Council (The Council) is the regional council that notified the proposed plan change and made decisions on it.

5. Federated Farmers of New Zealand is not a trade competitor for the purposes of section 308D of the Resource Management Act 1991.

6. The date of the receipt of the decisions by the applicant was 22nd April 2013.

1. PROVISIONS IN THE PLAN DECISION TO WHICH THE APPEAL RELATES

The relevant aspects of the decision to which the appeal relates are set out below including where appropriate specific relief sought that applies to the relevant part of the decision.

Throughout the appeal – insertions to wording are underlined, and strikeouts represent where Federated Farmers seeks for words to be deleted from specific provisions.

1.1 Policy 7B

Federated Farmers made a number of submissions on notified policies 7B, seeking in particular to insert a policy that provided for a catchment based review of water quality in schedule 15 and schedule 16.

In its decision Council made a number of amendments to Policy 7B including in particular 7.B.1.

Reasons for 1.1

1.1.1 Federated Farmers considers the plan fails to provide adequate policies or methods and the Council has not, in developing the plan given effect to or implemented the National Policy Statement for Freshwater Management in respect to catchment based limit setting.

1.1.2 Where Schedule 15 values cannot be met and landholders are meeting permitted activity standards for discharge, or where schedule 15 values are being met but landholders require resource consent under Rule 12 C, the National Policy Statement for Freshwater provides for a process that allows the community to review objectives and values for particular waterbodies, based on best available knowledge and set limits based on those agreed objectives and values.

Relief Sought for 1.1

1.1.3 Amend Policy 7.B.1

7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by:

(a) Recognising the differences in the effects and management of point and non-point source discharges; and

(b) Defining, in Schedule 15 and 17, characteristics and standards that describe good quality water; and

(c) Maintaining, from the dates specified in Schedule 15 and 17, good quality water; and

(d) ~~Enhancing~~ Improving water quality over time where it does not meet Schedule 15 and 17 standards; and

(e) Recognising discharge effects on groundwater

or

(f) Setting values, objectives and limits for water quality in a catchment through a community outcomes process where (c) or (d) are not being met

Insert new method(s)

To provide for (sub)catchment based objective, value and limit setting

1.2 Policy 7D and in particular Policies 7.D.4, 7.D.5, 7.D.6, 7.D.7:

Federated Farmers made submissions on notified policies 7D, seeking;

- amendments to recognise the cost of making changes to farm systems relative to the potential for reducing discharges;
- a stronger link to the potential effects of those discharges;
- increases to the timeframes for achieving discharge limits; and
- clarity on when a consent to discharge is required.

In its decision Council redrafted parts of policy 7D, including an additional four policies to address submission points in respect to providing guidance on consents where compliance with permitted activity rules for nutrient discharges could not be achieved.

Reasons for 1.2

1.2.1 Federated Farmers considers the policies do not adequately provide for an assessment of the likely costs of changing farm systems relative to the potential reduction in nutrient discharge.

1.2.2 The policies do not provide for a sufficiently technically robust connection between the requirement for resource consent and the achievement of good water quality in the receiving environment.

1.2.3 The policies do not provide enough certainty for a plan user as to when a consent will be required if permitted activity standards cannot be met.

1.2.4 The length of resource consents issued under Policy 7.D.7 is not sufficient to provide investment certainty or to achieve nutrient discharge limits in rules 12.C.

Relief Sought for 1.2

Federated Farmers seeks the following relief or wording to that effect.

1.2.5 Amend Policy 7.D.4

7.D.4 Provide for the consenting of any discharge under section 12.C:

(a) Where changes to land management practices or infrastructure have not been sufficient to meet permitted activity rules; or

(b) Where over a period of 12 months, the discharge of water or contaminant in accordance with 12.C.1.1(d) is consistently exceeding relevant limits in Schedule 16A

(c) Where thresholds of N concentration are exceeded in (new) Schedule 17

(~~b~~d) As part of the development of technology or innovative practices associated with improving water quality; or

(~~c~~e) For a short-term activity with short-term adverse effects.

1.2.6 Policy7.D.5

7.D.5 When considering any discharge under section 12.C, have regard to:

(a) The effects of the discharge on water quality, including cumulative effects; and

(b) A staged timeframe and management plan to achieve compliance with the permitted activity rules; and

(c) The extent to which the contaminants in the discharge result from the activities of the applicant; and

(d) The likelihood that the staged timeframe and management plan can be successfully applied; and

(e) The current state of technical knowledge.

(f) The costs of implementing the management plan relative to the effects of the discharge

(g) Trends in the quality of the receiving water relative to the Schedule 15 and 17 standards;

1.2.7 Policy7.D.6

7.D.6 When considering the duration of a resource consent under section 12.C, have regard to:

(a) The staged timeframe to achieve compliance with the permitted activity rules;

(b) The extent to which the contaminants in the discharge result from the activities of the applicant;

(c) Trends in the quality of the receiving water relative to the Schedule 15 and 17 standards;

(d) Any adverse effects of the discharge on the maintenance of natural and human use values;

(e) The extent to which the risk of potentially significant, adverse effects arising from the activity may be adequately managed through review conditions;

(f) The value of the investment in infrastructure; and

(g) The use of industry best practice.

(h) The costs of implementing the management plan relative to the effects of the discharge

1.2.8 Policy 7.D.7

7.D.7 The duration of a resource consent for a discharge, which breaches any relevant Schedule 16 or nitrogen leaching limit, will not exceed:

(1) Two years for discharges from a short-term activity with short-term adverse effects; or

(2) ~~Five~~ Ten years for all other discharges where the contaminants in the discharge result from the activities of the applicant.

1.3 Rule 12.B.1.5(d)

Federated Farmers made submissions on notified Rule 12.B.1.5 (d) seeking its deletion.

In its decision council retained the provision and amended the wording to clarify that the link to Rule 12C specifically includes the discharge of nitrogen.

Reasons for 1.3

1.3.1 Federated Farmers supports Rule 12.B.1.5 as providing for the discharge of Fertiliser onto production land as a permitted activity

1.3.2 Federated Farmers considers the rule primarily deals with the application of fertiliser to land and the requirement to avoid discharge of fertiliser directly to water

1.3.3 Rule 12.B.1.5(d) provides for the discharge of fertiliser to production land as a permitted activity if it complies with Rule 12.C.1.3 (discharge of Nitrogen to groundwater). The addition of a Nitrogen discharge clause to this rule makes rules around the application of fertiliser too uncertain, as at any single point in time plan users will not know whether or not the exercise of the permitted activity application of fertiliser will result in a breach of Rule 12.C.1.3.

1.3.4 It is effectively impossible for a farmer to isolate a source of estimated Nitrogen loss under Rule 12.C.1.3 at the time of applying fertiliser.

1.3.5 Federated Farmers considers any Nitrogen discharge to groundwater that may result as a function of applying fertiliser to production land should be a matter for consideration as part of a resource consent where a plan user cannot meet specified permitted activity discharge rules throughout the plan.

1.3.6 There are time lapses between where the permitted activity rules for fertiliser application and those for Nitrogen loss take effect. In principle, it is considered inappropriate for a permitted activity condition to require compliance with another rule, especially where that rule has a delayed implementation period.

1.3.7 Federated Farmers considers that the plan is inconsistent in its application of activity status for resource consent where permitted activity standards cannot be met. In particular Rule 12.B.1.5 for the application of fertiliser to land, defaults to a full discretionary activity. Federated Farmers considers this is inconsistent with Rule 12.C.1.3, in which a breach of Nitrogen loss to groundwater will require a restricted discretionary activity consent.

Relief Sought for 1.3

Federated Farmers seeks the following relief

1.3.8 That Rule 12.B.1.5 (d) be deleted.

12.B.1.5 *[Moved from 12.8.1.5]* The discharge of fertiliser onto production land, in circumstances where it may enter water, is a ***permitted*** activity, providing:

(a) All reasonable measures are taken to minimise any discharge of the fertiliser to water in any water body, drain or water race, or to the coastal marine area; and

(b) The discharge is carried out in accordance with the manufacturer's directions*; and*

(c) There is no damage to fauna or New Zealand native flora, in or on any Regionally Significant Wetland; and

and

~~(d) Any discharge of nitrogen also complies with Rule 12.C.1.3.~~

1.3.9 **Amend 12.B.3**

That a new restricted discretionary rule be added under 12.B.3 to provide for the application of fertiliser to land where it cannot meet permitted activity rule 12.B.1.5

1.4 Rule 12.C.0.2

Federated Farmers made submissions on Rule 12.C.0.2 seeking the deletion of a provision that prohibits the application of any contaminant from an animal waste system that results in ponding.

The Council in its decision rejected our submission and retained the relevant provision in rule 12.C.0.2.

Reasons for 1.4

1.4.1 There are a number of occurrences where the application of Farm Dairy Effluent can result in ponding where there is no more than minor effect.

1.4.2 It is inappropriate to prohibit ponding where the effects of such ponding are no more than minor.

1.4.3 If the rule is interpreted as notified by decisions, landowners who are exercising good management practice, will be undertaking a prohibited activity.

1.4.4 There are designed animal waste systems, silage storage and composting that discharge liquid into a fully contained sump, those systems will now be a prohibited activity.

Relief sought for 1.4

1.4.5 Amend Rule 12.C.0.2 as follows

12.C.0.2 The discharge of any contaminant from an animal waste system, silage storage or a composting process:
(i) To any lake, river or Regionally Significant Wetland; or
(ii) To any drain or water race that connects to a lake, river or Regionally Significant Wetland; or
(iii) To the bed of any lake, river or Regionally Significant Wetland; or
(iv) To any bore or sump; or
(v) To land within 50 metres of:
(a) Any lake, river or Regionally Significant Wetland; or
(b) Any bore or ~~sump~~; or
(vi) To saturated land; or
~~(vii) That results in ponding~~
(vii) That results in excess ponding present after one hour following application
is a ***prohibited*** activity.

1.5 Rule 12.C.1.1

Federated Farmers made submissions on rule 12.C.1.1 seeking significant changes to the permitted activity rule that provides for discharge of contaminants in schedule 16 A. In particular, Federated Farmers sought that concentrations of contaminants be measured over a 12 month period to account for a range of values that will occur in any one off sample and to enable the landowner to address any minor system changes, as well as providing a step towards applying for resource consent, rather than immediately requiring a resource consent due to non compliance with one sample.

The Council in its decisions made changes to rules 12.C.1.1 but rejected Federated Farmers submissions in respect to where a consent will be required if schedule 16 concentration limits cannot be met.

Reasons for 1.5

1.5.1 The rule provides for a permitted activity, provided limits (set out in schedule 16A) on the concentration of nutrients where water leaving a property first enters water, can be met. If these limits cannot be met then the rule provides for an application to be made for a restricted discretionary activity under rule 12.C.2.1

1.5.2 The rule is too unclear in respect to where a resource consent will need to be applied for. There is no provision for a number of samples to be taken to determine an average over time nor is there a process to apply for resource consent.

1.5.3 Measured concentration limits in schedule 16 can show large variance from sample to sample.

1.5.4 Plan users will very likely move in and out of meeting permitted activity standards and the resource consent requirements create too much uncertainty in plan implementation.

1.5.5 The rule is focussed on the loss of contaminants in run-off to surface water yet also requires landholders to meet limits for loss of Nitrogen to groundwater in the same rule. At any one point in time a plan user will not know whether they are compliant with Nitrogen loss to groundwater rules in 12.C.1.3.

Relief sought for 1.5

1.5.6 Amend Rule 12.C.1.1 as follows

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

(a) The discharge does not result in flooding, erosion, land instability or property damage; and

(b) There is no discharge of water from one catchment to water in another catchment; and

(c) The discharge does not change the water level range or hydrological function of any Regionally Significant Wetland; and

(d) Where the discharge first enters water in any lake, river, wetland, or any open drain or water race that flows to a lake, river or wetland, the discharge:

(1) From 01 April 2020, does not <u>consistently</u> exceed the relevant limits given in Schedule 16A <u>sampled once a month over a 12 month period</u>, when, at the representative flow monitoring site, the water flow is at or below the reference flow indicated in Schedule 16B; and

(2) Does not contain sediment that results in:
a. A visual change in colour or clarity; or
b. Noticeable local sedimentation,
in the receiving water; and

(3) Does not have an odour, oil or grease film, scum or foam; and

(4) Does not have floatable or suspended materials, other than inorganic sediment; and

(e) ~~Any discharge of nitrogen also complies with Rule 12.C.1.3.~~

1.6 Rule 12 .C.1.3

Federated Farmers made submissions on rule 12.C.1.3 seeking significant changes to the permitted activity rule that provides for discharge of Nitrogen to groundwater. Our relief sought the deletion of region wide Nitrogen limits and deletion of sensitive Nitrogen zones or alternately significant changes to those limits. We presented a refined version of that submission during the hearing which sought to amend rule 12.C.1.3 to only require and calculate such limits where the receiving environment meets certain Nitrogen thresholds. Federated Farmers also expressed concern about the limitations in the use of the OVERSEER model in a regulatory context.

The Council in its decisions made changes to rules 12.C.1.3 but rejected Federated Farmers submissions in respect to linking the leaching limits to achieving the standards in the receiving environment and the adoption of a new schedule setting out thresholds for when relevant Nitrogen leaching limits would be required to be set through a community lead catchment based process.

Reasons for 1.6

1.6.1 The rule provides for the discharge of Nitrogen to groundwater as a permitted activity provided certain nitrogen leaching rates can be met. If these cannot be met then a resource consent is required under rule 12.C.2.3

1.6.2 The council in making a decision on the rule and the plan has failed to adequately demonstrate the need for setting the nitrogen leaching rates or to demonstrate the link to achieving good water quality standards set out in schedule 15.

1.6.3 The proposed limits on Nitrogen leaching rates are contrary to the purpose of the Resource Management Act, they undermine investment in existing infrastructure and will require some landowners to change existing land use.

1.6.4 There has not been an adequate assessment or demonstration of the social and economic implications of adopting the limits.

1.6.5 The council in making its decision failed to consider the level of accuracy of the OVERSEER model.

1.6.6 It is too unclear for plan users where they would be required to apply for a resource consent under the rule.

Relief Sought for 1.6

1.6.7 Amend Rule 12.C.1.3 as follows

12.C.1.3 The discharge of nitrogen[1] onto or into land in circumstances which may result in nitrogen entering groundwater, is a ***permitted*** activity, providing:

(a) From 01 April 2020, the nitrogen leaching rate will ~~does~~ not result ~~exceed~~ in :

~~(a)~~ Limits on relevant concentration of N set out in (new) schedule 17 and Maps (H1 – H6) being exceeded

~~(i) 10 kgN/ha/year on that area of the landholding located over the relevant Nitrogen Sensitive Zone identified in Maps H5 and H6; and~~

~~(ii) 20 kgN/ha/year on that area of the landholding located over~~

[1] For the purpose of Rule 12.C.1.3, nitrogen comprises of organic nitrogen, ammoniacal nitrogen, nitrite nitrogen and nitrate nitrogen forms.

~~the relevant Nitrogen Sensitive Zone identified in Maps H1 to H4; and~~

~~(iii) 30 kgN/ha/year on that area of the landholding located outside any Nitrogen Sensitive Zone identified in Maps H1 to H6,~~

as ~~calculated~~

estimated using OVERSEER® version 6.0; and

(b) From 1 May 2014, the landholder will:
  (i) Maintain a record of all necessary data to run OVERSEER® version 6.0; and
  (ii) Provide Council upon request with:
    1) An OVERSEER® version 6.0 output and input parameter report prepared by an accredited OVERSEER® version 6.0 user; or
    2) All necessary data to run OVERSEER® version 6.0.

1.6.8 Amend OVERSEER references

Provide for a policy and or method to enable the Council to deal with changes to versions of OVERSEER
or
Delete all reference to a version throughout the plan change replacing OVERSEER version 6.0 with OVERSEER

1.7 Rule 13.5.1.8A and 13.5.1.8B

Federated Farmers made submissions on rules 13.5.1.8A and B, regarding stock disturbance and sought changes to the rules to provide for situations where stock cross and access water with no more than minor effects as a permitted activity.

The Council in tis decision made changes to those rules on stock disturbance and to the activity status of a breach of the permitted activity standard, providing for an application to be made for discretionary consent where previously it was prohibited. The Council included as a permitted activity standard provision for stock access for intentionally driven stock where there was no suitable site for the placement of a structure.

Reasons for 1.7

1.7.1 The rule is unclear as to what would constitute a suitable site for the erection of placement of a structure

1.7.2 There are a number of places throughout Otago where stock are extensively grazed and where moving stock from place to place involves livestock crossing waterways with no more than minor effects.

1.7.3 These areas may contain sites for placement of a structure yet the effects of the activity are no more than minor and the cost and management challenges of installing a structure would be prohibitive.

Relief Sought for 1.7

1.7.4 Amend rules 13.5.1.8A and B as follows

13.5.1.8A The disturbance of the bed of any lake or river, or any Regionally Significant Wetland by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a permitted activity, providing it does not:

(a) Involve feeding out; or

(b) Cause or induce noticeable slumping, pugging or erosion; or

(c) Result in a visual change in colour or clarity of water after the disturbance ceases; or

(d) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

Note: This rule does not authorise any discharge to water or discharge to land in circumstances where contaminants may enter water. Sections 15(1)(a) and 15(1)(b) of the Act apply.

13.5.1.8B The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, by livestock where they are being intentionally driven, and any resulting discharge or deposition of bed material, is a permitted activity, providing there is no:

(a) ~~Existing structure available for use, and there is no suitable site for the erection or placement of a structure, to avoid bed disturbance; or~~

(~~b~~a) Visual change in colour or clarity of water, after the disturbance ceases; or

(~~c~~b) Noticeable slumping, pugging or erosion.

1.8 Schedule 15 – Good water quality

Reasons for appeal

Federated Farmers made submissions and presented technical evidence on schedule 15 – "good quality water". In its submissions and evidence the applicant expressed concern in respect to how the schedule 15 parameters had been derived as well as the link between achieving the limits set out in the schedule and the implementation of the plan.

The Council in making a decision on schedule 15 has made a number of amendments, including defining how the standards will be measured. The decision has significant implications for the entire plan.

Reasons for appeal

1.8.1 The decision on schedule 15 is a significant departure from the notified version of the plan, especially in respect to the use of 5 year 80th percentile values, when water is at or below median to determine how the standards apply. There is a lack of technical

analysis in the decision as to the effect of this decision on submitters.

1.8.2 Federated Farmers raised concern in its evidence with adopting and referring to ANZECC guidelines as the basis for setting standards or instream water quality limits, where the guidelines specifically state that "default trigger values should only be used until site or ecosystem – specific values can be generated"

1.8.3 The schedule will result in an overly restrictive assessment of what constitutes good quality water at all sites in the region in particular in relation to the measurement of E Coli. In its decision, Council has failed to consider the impacts on the economic and social well being of the region by switching from median values to 80th percentile values, in particular for E coli.

Relief Sought for 1.8

Amend schedule 15 to adopt standards as medians.

Include a policy (appeal point 1.1) and a method to provide for (sub)catchment based objective, value and limit setting

1.9 Glossary – definition of fertiliser

Federated Farmers made submissions on the definition of fertiliser and sought an alternate definition consistent with definitions in other plans and in accordance with that accepted by the Fertiliser Association of New Zealand

The Council made decisions on that submission and adopted the definition of fertiliser as notified.

Reasons for 1.9

1.9.1 The Council in making a decision on the definition rejected Federated Farmers submissions.

1.9.2 Federated Farmers and other submitters sought a change to the definition of fertiliser to align it with the definition in the Agricultural and Veterinary Medicine Act, the Code of Practice for the Sale of Fertiliser and the Code of Practice for Nutrient Management

1.9.3 Federated Farmers considers it crucial for there to be a consistent definition of fertiliser across different Acts and codes of compliance.

Relief Sought for 1.9

Amend the definition of fertiliser:

Fertiliser	~~Any proprietary substance specifically manufactured for use in increasing the nutrient status of land. Excludes compost, effluent or seaweed.~~

(a) means a substance or biological compound or mix of substances or biological compounds that is described as, or held out to be suitable for, sustaining or increasing the growth, productivity, or quality of plants or, indirectly, animals through the application to plants or soil of—
(i) nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, chlorine, and sodium as major nutrients; or
(ii) manganese, iron, zinc, copper, boron, cobalt, molybdenum, iodine, and selenium as minor nutrients; or
(iii) fertiliser additives; and
(b) includes non-nutrient attributes of the materials used in fertiliser; but
(c) does not include substances that are plant growth regulators that modify the physiological functions of plants"
[Source: 3 Interpretation; Agricultural and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011]

2. REASONS FOR APPEAL

2.1 The decision is contrary to Part 2 of the Resource Management Act (RMA) and in particular section 5 in that it does not promote the sustainable management of natural and physical resources and does not adequately enable people and their communities to provide for their economic and social well being

2.2 That the decision fails to adequately consider or evaluate the costs and benefits or alternatives of the plan change, as required in Section 32 RMA

2.3 Is inconsistent with the National Policy Statement for Freshwater in that in adopting guidelines/standards as limits the decision on the plan has failed to consider a full range of community values for freshwater, nor has the Council taken a catchment/sub catchment approach to considering the full range of values and developing appropriate methods available achieve those through the limit setting process

2.4 That the plan lacks sufficient technical analysis and association between achieving 'good quality water' in the receiving environment and the constraints placed on landowners to achieve those standards through policies and methods contained within the plan.

3. RELIEF SOUGHT APPLYING TO WHOLE APPEAL

3.1 That the Court amends the decision of the Council as set out above in relation to points of appeal and the relief sought for each of those decisions

3.2 That the Court adopts any further or consequential relief that is required to give effect to the relief set out above

4. ATTACHMENTS

Federated Farmers attaches the following documents to this notice of appeal

4.1 A copy of its submission

4.2 A copy of the relevant decision

4.3 A list of names and addresses of persons to be served with a copy of this notice

Dated the 4th of June 2013

Signed
For and on behalf of
Federated Farmers of New Zealand

Address for Service:

Matt Harcombe
Federated Farmers of New Zealand
1 Birch Street
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DUNEDIN 9058

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Copies to be sent to:
Please see attached list of submitters

Advice to recipients of copy of notice of appeal

How to become party to proceedings

You may become a party to the appeal if you made a submission on the matter of this appeal; and you lodge a notice of your wish to be a party to the proceedings (in form

SUBMISSION

TELEPHONE 0800 327 646 | **WEBSITE** WWW.FEDFARM.ORG.NZ

FEDERATED FARMERS OF NEW ZEALAND

To: **Otago Regional Council**

Attention: Dale Meredith

On: Proposed Plan Change 6A (Water Quality)
Regional Plan: Water for Otago

By: Federated Farmers of New Zealand

Date: 2 May 2012

Contact: Matt Harcombe
Regional Policy Manager
South Island
Federated Farmers of New Zealand

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A. GENERAL SUBMISSIONS PERTAINING TO THE WHOLE PLAN PLAN CHANGE

Federated Farmers supports the plan change in part, but only if council adopt significant changes. If these changes are not adopted Federated Farmers opposes the plan change

Reasons for submissions

1. Federated Farmers of New Zealand operates under a voluntary membership and is only relevant to those members if it is effectively communicating with them and representing their views. There are over 1200 individual farming business memberships in Otago and North Otago provinces, this represents, at the very least 3000 people involved in the every day business of farming.

2. This submission must therefore not be treated as an individual submission but as one that reflects what the farmers who are ultimately responsible for the success of the proposals in this plan, think about whether or not it will change the way they do things on their farm that have the potential to impact on the regions water quality.

3. If farmers don't understand what they need to achieve or are unable to buy into the objectives of the plan change then no amount of words or limits or enforcement will be successful in improving or maintaining water quality in the region.

4. Federated Farmers staff and elected members have had literally hundreds of conversations with farmers in the region, expressing that they don't actually know what the plan will mean to them, what the limits mean to their farm, how they will measure them and how they will meet them. Most of those farmers have never written a submission before, so it is unlikely that the submissions you have received even represent a small percentage of the farmers who are concerned or support aspects of the plan change. Many of them don't know what to think, because they don't understand how the plan will work and what the limits in schedule 16 will mean to them.

5. Those people and conversations with those farmers have informed this submission. We have sent each one of those individual members a letter outlining how important this plan change is to their business and they have responded telling us how they think it will affect them. This submission is a reflection of both the concerns and support that has been expressed for the plan.

6. This submission also draws on our extensive national experience of the effects on farmers of regulating farm activities to manage water quality and the plans and processes of setting limits to achieve water quality targets. We have drawn on this experience to develop a response to the proposals to manage water quality outlined in the proposed plan change 6A and to submit on whether or not the current plan will achieve its purpose and what changes might be required to enable it to do so.

7. The effect of and the importance of getting this plan right cannot be underestimated. It is critical that as decision makers you consider the real not theoretical effects of adopting this plan change.

8. There are a number of principles by which our members consider should underpin planning documents related to the management of water quality.

    i. **In identifying water quality issues, the linkage between cause and effect should be evidenced based.**

    ii. **Water quality issues should not be the justification for determining or controlling land use.**

    iii. **Water quality policy should be based on a science informed risk priority framework.**

    iv. **Methods to implement any water quality objectives and policies should be cost-effective to implement, comply with and to monitor.**

    v. **Methods to implement any water quality objectives and policies should be flexible enough to enable landowners to adapt the method to their own farm**

    vi. **Water Quality policy should empower and encourage self-responsibility, adaptive management and innovation.**

    vii. **Objectives policies and methods should provide certainty to encourage long term on farm decision making and planning**

9. In general the plan change is consistent with some of these principles in that it attempts to be purely effects based, provides for flexibility and on farm innovation and aims to reduce on farm compliance and consent costs. Our members support the council's bold attempts to produce an effects based plan that doesn't attempt to tell farmers how to farm but tells them what they need to achieve. In principle that is exactly our members expectation of what a plan should do.

10. However as the detail of the operation of the plan change has emerged through consultation and discussion with members, farmers are very concerned about some particular aspects of the plan change and in particular how these might be implemented. It is now our members view that there are some fundamental (but not insurmountable) flaws with the approach taken that are primarily borne out in the following key areas

    - There have been fundamental changes to the plan between catchment based consultation and notification that have not given farmers enough time throughout the statutory consultation process to understand the implications of the proposed plan change

    - The community has not come to a decision on whether or not the limits are appropriate for their catchments – there has been no

analysis or discussion of the economic or social impacts of the proposed limits – this is not consistent with the NPS for freshwater

- It is not appropriate to not provide for a consent path for some of the proposed permitted activities

- The proposed Nitrogen discharge limits in the sensitive groundwater zones are potentially devastating for farmers in those zones

- There are some fundamental challenges for farmers to know if they will be compliant with a permitted activity rule that sets discharge limits from water leaving the farm, they do not know how these limits will be monitored or enforced nor does the plan provide sufficient certainty as to enforcement or the requirement to apply for a resource consent if the limits cannot be met

- The rules surrounding stock access are unclear and are not effects based and do not provide for reasonable transition times to achieve compliance with the plan

- The attempt at linking the discharge of nutrient, sediment and bugs at a farm level with the resultant land use that caused those effects is supported, the plan does not differentiate enough to ensure that the discharge limit is linked to the actual effect in the receiving environment i.e the ability of the receiving water body to assimilate nutrient without resulting impact on its values

- The elimination of any reasonable mixing zones is in conflict with the Resource Management Act and the Regional Policy Statement

- It is very difficult to understand how the limits set in schedule 16 will be monitored or enforced or what the criteria will be that requires someone to gain a resource consent to transition them to meeting the limits in schedule 16

- The plan fails to provide for or enable sub catchment based solutions to improving water quality

- The limits set in Schedule 15 and 16 are not sufficiently technically justified in the section 32 report and require significant amendment to be consistent with nationally accepted water quality standards

.Decisions sought

Council adopt the proposed plan change with the following specific amendments outlined below in provision by provision submissions

3 SPECIFIC SUBMISSIONS

3.0 Provision in proposed plan change

7.A.3 to have individuals and communities recognise and manage the effects of activities on water quality, including cumulative effects

Submission:

Support

Summary of Reasons for submission

Federated Farmers strongly supports this objective but believes that the plan change does not encourage community or catchment based approaches to improving water quality. The plan change focusses its policies and rules on individuals managing the effects of their own activities on water quality. While this is important it may also be possible to achieve improved water quality through catchment based initiatives, such as diversion to constructed wetlands, waterbody enhancement or an acceptance by a community of elevated values at certain times of the year where there are only minor effects on the long term health of the waterway, simply because it is too expensive or socially or economically compromising for the community to achieve the values.

Decision sought

Adopt the objective and ensure that policies and rules give effect to the objective throughout the plan change

3.1 Provision in the Proposed Plan Change

7.B – POLICIES GENERAL

7.B.1 Ensure water is of good quality by the target dates described in Schedule 15, to support natural and human use values, by:

a) *Avoiding discharges of contaminants with noticeable effects on natural and human use values; and*

b) *Allowing discharges of contaminants that cumulatively have minor effects, or are short-term; and*

c) *Minimising disturbance of the beds of rivers and lakes.*

Submission:

Federated Farmers opposes 7.B.1 in part

Summary of Reasons for this Submission

Federated Farmers supports Council's focus on maintaining and improving water quality within the region. However, we have concerns with the target dates for achieving water quality contained within Schedule 15 as referred to in 7.B.1.

Federated Farmers has some concerns in respect to the use of the word avoiding discharges of contaminants in respect to the overall operation of the plan. The plan specifically permits certain discharges to water and to land in a manner which may

enter water. The Act provides for the avoidance, remedy or mitigation of adverse effects.

Federated Farmers is also concerned that the nutrient targets within Schedule 15 are operative immediately in some catchments. Where the catchments meet their targets already we can understand the rationale for maintaining water quality at its current state and that lead in times are not required if the water body is already of good quality. However we note that there are a number of waterbodies that exceed those parameters. We consider that where limits in the receiving environment are being exceeded currently that the timeframes to achieve those should be extended to meet those of schedule 16. This will provide stronger links between the compliance with discharge limits from farm and the resulting improvements in the receiving environment.

Relief Sought

Council amend transition times within Schedule 15

Council amend the policy as follows to provide for the remedy or mitigation of effects

a) Avoiding, remedy or mitigate the effects of discharges of contaminants with noticeable effects on natural and human use values; and

3.2 Provision in the Proposed Plan Change

7.B.4 Encourage adaptive management and innovation to reduce the discharge and impact of contaminants on water quality.

Submission

Federated Farmers supports Policy 7.B.4

Summary of Reasons for this Submission

Federated Farmers supports the encouragement and promotion of adaptive management, non-regulatory methods and innovation to improve future management of water quality within the region.

An adaptive management approach facilitates on-going learning throughout the process. This will enable both Council and plan users to learn more about the impact of contaminants on water quality within the region and will ensure better long-term results.

Relief Sought

Adopt Policy 7.B.4 as proposed.

3.3 Provision in the Proposed Plan Change

7.D Policies for nitrogen, phosphorus, Escherichia coli and sediment (excluding in human sewage, hazardous wastes and stormwater, and from industrial and trade premises)

7.D.1 Apply limits on contaminants in discharges where they are about to enter water.

7.D.2 Provide for the consenting of discharges, that first occurred prior to 31 March 2012, for a limited time period beyond the timeframe specified in Schedule 16, where:

a) *Changes to land management practices or infrastructure to minimise the discharge have been implemented; and*

b) *Additional changes to management practices or infrastructure are needed to achieve the limits; and*

c) *An expeditious path to compliance with Schedule 16 is identified.*

7.D.3 Provide for the consenting of discharges that exceed Schedule 16 limits as part of the development of technology

Submission

Federated Farmers opposes 7.D in part.

Summary of Reasons for this Submission:

Federated Farmers has concerns with both the limits and the timeframes to achieve the limits as specified in Schedule 16 referred to within 7.D.2 and 7.D.3.

The policy does not provide for the discharge of contaminants to water in accordance with the ability of the receiving environment to assimilate those contaminants. While we accept that the policy and the plan are an attempt at a true effects based approach FFNZ considers that where some discharges are exceeding the current proposed limits in schedule 16 there may be no more than minor effects.

The Policy does not include a provision that recognises the impact of schedule 16 on existing investment and so is inconsistent with Section 5 of the Resource Management Act.

It is not clear from the split in the policy between 7D2 and 7D3 where these discharges differ. Does 7D2 relate to point source or consented discharges occurring prior to notification date, as by their very nature diffuse discharges intermittently so it would be difficult for an applicant to prove that a discharge has been occurring prior to that date unless it was consented. Federated Farmers considers that the time bound provision should be deleted and policies 7D2 and 7D3 should be merged.

Federated Farmers also considers that the policy should provide some guidance on how someone discharging contaminants to water that is contrary to schedule 16 will know when they require a resource consent, the timeframe for which those consents will be issued and an account of the economic impact and the achievability of reaching the water quality discharge limits over time.

Relief Sought

Combine policies 7D2 and 7D3 into a new 7D2 that reads as follows

7.D.2 Provide for the consenting of discharges~~, that first occurred prior to 31 March 2012~~, for a limited time period beyond the timeframe specified in Schedule 16, where:

a) Changes to land management practices or infrastructure to minimise the discharge have been implemented; and

b) Additional changes to management practices or infrastructure are needed to achieve the limits; and

c) An expeditious path to compliance with Schedule 16 is identified.

d) <u>where the economic cost and effect on existing investment of complying with schedule 16 outweighs the immediate environmental improvement in the receiving environment where the discharge enters water</u>

Delete existing policy 7.D.3

Include policy guidance on where a consent is required and how long a consent will be issued for

3.4 Provision in the Proposed Plan Change

Rule 12.B.1.1 – 12.B.1.4

Section 12B includes rules for the discharge of hazardous substances, hazardous wastes, other specified contaminants, stormwater and from industrial and trade premises as ***permitted*** activities.

Rules 12.B.1.1 – 12.B.1.4 provide for:

- *The discharge of any herbicide to water for the control of aquatic plants*
- *The land based discharge of any pesticide onto land*
- *The discharge of herbicide to air or land in circumstances where it will enter water*
- *The aerial discharge of any pesticide onto land in circumstances where it, or any contaminant associated with its breakdown, may enter water, is a permitted activity.*

Submission: Federated Farmers supports in part rules 12.B.1.1 – 12.B.1.4

Reasons for submission

Federated Farmers supports the retention of the applications of herbicide and pesticide as permitted activities and providing for the applications to take place in accordance with any industry certified accreditation and good practice and in accordance with guidelines and manufacturers instructions. We consider that generally the site standards in the proposed rules are reasonable.

However it is unclear how the provision (g) of the proposed rules will work, as outlined below

There is no change to the water level or hydrological function, or no damage to the flora, fauna or its habitat, in or on any Regionally Significant Wetland

Clause (g) creates uncertainty in how the rule will be applied and part of it is not directly relevant to the proposed rules. While we accept that the discharge of herbicide and pesticide should avoid indigenous flora and fauna of regionally significant wetlands and that in most instances a resource consent would be required from the relevant territorial authority for the clearance of indigenous vegetation, there should be no change to the hydrological function of the wetland as a result of the exercise of the activities that these rules control. If it does result in increased function of an existing drain in a wetland then this is covered by relevant rules in the quantity chapters of the regional plan: water. Further any controls on flora and fauna should be restricted to indigenous flora and fauna that directly result from the activities controlled by these rules.

Relief Sought:

FFNZ supports the intent of Rules 12.B.1.1 – 12.B.1.4 and seeks that they be adopted with the following amendment to 12.B.1.2 (e); 12.B.1.3 (g); 12.B1.4 (e) and 12.B1.5 (c) or words to that effect

"*There is no change to the water level or hydrological function, or no damage to ~~the~~ indigenous flora, fauna or its habitat, in or on any Regionally Significant Wetland, resulting directly from the activity that is subject to this rule*".

3.5 Provision in the Proposed Plan Change

12.B.1.5 The discharge of fertiliser onto production land, in circumstances where it may enter water, is a ***permitted*** *activity, providing:*

....

(c) there is no change to the water level or hydrological function, or no damage to the flora, fauna or its habitat, in or on any Regionally Significant Wetland

(d) It meets the provisions of Rule 12.C.1.3

Submission

Federated Farmers opposes in part 12.B.1.5

Summary of Reasons for this Submission

Federated Farmers supports a permitted activity framework for the application of Fertiliser. The Fertiliser industry has put immense investment into developing product and application certification through fertmark and spreadmark, the latter largely determining precise applications of Fertiliser both aerially and groundspread to avoid any application to or near to water where it may enter water. To that end Federated Farmers supports the councils approach to the application of Fertiliser.

However FFNZ has serious concerns with the limits and standards imposed on nitrogen discharge to groundwater through Rule 12.C.1.3, particularly in the case of specified sensitive groundwater zones. The issues in respect to 12.C.1.3 are outlined in the submission on that rule.

Federated Farmers considers that the reference to rule 12.C.1.3 is unnecessary in the permitted rule for the application of fertiliser to land. In line with the effects based approach that Council is taking to other activities in the plan, the application of fertiliser itself should not be linked to the Nitrogen loss limits outlined in 12.C.1.3. Nitrogen can be lost from the root zone to groundwater as a result of excess N Fertiliser application but, it also comes form a number of other sources. The link to the N loss provision is too uncertain and too difficult to administer and or enforce. If someone cannot meet the discharge limits of N, then they will require a resource consent, of which one of the conditions may be to limit the application of Nitrogen based fertilisers.

Clause (c) creates uncertainty in how the rule will be applied and part of it is not directly relevant to the proposed rules. While we accept that the discharge of fertiliser should avoid indigenous flora and fauna of regionally significant wetlands and that in most instances a resource consent would be required from the relevant territorial authority for the clearance of indigenous vegetation, there should be no change to the hydrological function of the wetland as a result of the exercise of the activities that these rules control. Further any controls on flora and fauna should be restricted to indigenous flora and fauna that directly result from the activities controlled by these rules.

Relief Sought

Adopt permitted activity rule 12.B.1.5 with the following amendments

12.B.1.5 The discharge of fertiliser onto production land, in circumstances where it may enter water, is a ***permitted*** *activity, providing:*

....

~~*(c) there is no change to the water level or hydrological function, or no damage to the flora, fauna or its habitat, in or on any Regionally Significant Wetland*~~

~~*(d) It meets the provisions of Rule 12.C.1.3*~~

3.6 Provision in the Proposed Plan Change

12.C.0 – Prohibited Activities : No Resource Consent will be Granted

Submission

Federated Farmers opposes Rule 12.C.0

Summary of Reasons for this Submission

Transition between prohibited and permitted activities Federated Farmers understands the rationale behind prohibiting activities in the proposed rule to be that the council, does not wish to issue consents for activities that result in a reduction in water quality and to simplify and streamline the planning provisions. Federated Farmers is largely supportive of that approach. However, Rules 12.C.0.1 through to 12.C.0.5 prohibit discharges that basically have any measurable effect on the receiving water at the point of discharge. Federated Farmers has concerns that there will be situations where through adopting all good practice, the provisions cannot be met, but the effects on water quality after reasonable mixing will be minor. To that end Federated Farmers considers that the prohibited activities outlined in rules 12.C.0.1 – 5 should be non complying activities. This would mean that the plan would presume that these activities will not take place but there will be stringent conditions placed around them if resource consent is granted.

Section 107 of the RMA/Otago Regional Policy Statement – reasonable mixing and defining discharges Further, Federated Farmers considers that the provisions set out in section 107 of the Act in respect to a discharge to water or to land in circumstances where it may enter water contain the words that define the levels of effects of discharges for a reason. Further section 107 also provides for reasonable mixing to occur as a measure of the actual effects of the activity. Federated Farmers seeks that 12.C.0 is reworded to be consistent with section 107 of the Act. The proposed rules are also contrary to the regional policy statement for Otago, 6.5.5(c) that provides for discharges to water to maintain water quality in the receiving water body after reasonable mixing.

Relief Sought

Delete prohibited activities in Rules 12.C.0.1,2,3

Replace prohibited with Non complying throughout rules in 12.C.1,2,3

Adopt rules as non complying with the following amendments

Reword rules 12.C.0.1,,12.C.0.2 in accordance with section 107 and provide for reasonable mixing

3.7 Provision in the Proposed Plan Change

12.C.0.4 *Any discharge of sediment from disturbed land to water, where no measure has been taken to avoid sediment runoff, is a* ***prohibited*** *activity.*

Submission

Federated Farmers opposes Rule 12.C.0.4.

Summary of Reasons for this Submission

Federated Farmers has serious concerns with Rule 12.C.0.4. Under the proposed wording, and due to the immediate effect of the rule, farmers who have put in a winter crop or who have an existing cultivated paddock could immediately be in breach of this provision if they haven't adequate mitigation in place to avoid sediment run-off. Federated Farmers opposes the retrospective nature of this rule.

Within the Otago region there is a huge variability in terrain, climate and land use. Otago's land types range from rolling hillsides and pastoral landscape to tussock grasslands, forests and wetlands. Consequently, a 'one-size-fits-all' rule for sediment run-off of disturbed land within the region is simply not practicable or reasonable.

Erosion and sediment run-off can occur irrespective of land use and they are a constant part of land modification and weathering processes. It is through these processes that many of the lowland plains within the region were formed.

From a practical perspective, farmers would be left with the option of either leaving a strip of land to mitigate the effects of any run-off or by not cultivating the land at all, an option which would have considerable negative effects both on the farming operations and the on-going quality and workability of the land.

Clearly the planting, grazing and use of winter crops throughout Otago is a critical part of farming systems. Federated Farmers is concerned that the rule is too vague in respect to what an adequate measure might be to avoid the loss of sediment.

For many types of terrain and land types, in times of heavy on-going rainfall, a strip of land will not sufficiently prevent surface water run-off, leaving farmers little options to practicably work within Rule 12.C.0.4. While we appreciate that farmers will innovate and continue to find solutions that are driven by the need to retain productive top soil, we consider that the need for a specific rule around sediment loss outside of permitted standards is not required.

Federated Farmers supports Council's overall objective of maintaining and improving water quality over time within the region. However we do not consider this is best achieved through unreasonable and impractical prohibited rules. The Section 32 analysis of why these activities need to be prohibited does not provide any further certainty or justification as to why this approach has been taken.

Relief Sought

Federated Farmers requests the deletion of Rule 12.C.0.4 and the following word change or similar to 12.C.1.1

~~*12.C.0.4*~~ ~~*Any discharge of sediment from disturbed land to water, where no measure has been taken to avoid sediment runoff, is a prohibited activity.*~~

12.C.1.1 *The discharge of sediment to water is a permitted activity, providing:*

(i) All reasonable steps are taken to avoid the discharge of sediment from land to water; and

(ii)~~*(i)*~~ *After the cessation of rainfall on the site, the discharge does not cause sedimentation.....*

3.8 Provision in the Proposed Plan Change

12.C.0.5 Any discharge of contaminants from an animal waste system, silage storage or a composting process:

i. To a water body; or
ii. To saturated land; or
iii. To a conduit to water, or the bed of any lake or river, or Regionally Significant Wetland; or
iv. That enters water from land; or
v. That results in ponding:

Is a ***prohibited*** *activity*

Submission

Federated Farmers opposes Rule 12.C.0.5 in part

Summary of Reasons for this Submission

Federated Farmers has concerns with Rule 12.C.0.5 applying to "any discharge of contaminants" from the specified sources.

Under the existing plan rules within Rule 12.8 there is reference to ensuring "ponding of animal waste from the discharge does not occur" but this is wholly in relation to the discharge of contaminants that have been collected in any animal waste collection system onto specified zones of production land.

The previous rules enabled the disposal of agricultural waste, or the use of fertiliser, while providing appropriate protection for natural and human use values supported by water bodies.

Federated Farmers is concerned with Rule 12.C.0.5's generic extension of the previous rules beyond animal waste systems to silage storage and that from a composting process. The rule makes any such discharge within the entire region a prohibited activity when it is to one of the places specified within (i) to (v) and this inappropriately captures standard farming practices that may have only a minor or negligible adverse effect on the environment.

12.C.0.5 prohibits the discharge of Farm Dairy Effluent and other similar discharges to land that results in ponding or their application over a conduit to water. The application of Farm Dairy Effluent to land in Otago and around the country has quite rightly been the subject of scrutiny as the communities expectations around the management of discharges to water increases, and we have a greater understanding of the impacts of applying to land and its pathways of loss to water. There have been endless discussions in respect to the effects of ponding of Farm Dairy Effluent and whether the minor ponding results in any actual effects or loss to water. There is

widespread concern that the current rule will result in compliance action for ponding of FDE where it hasn't entered or will not enter water. There are instances where application rate exceeds infiltration rate that minor ponding will occur, but will not limit the ability of the soil to retain FDE without it reaching water. The plan aims to be effects based so should in line with other discharges provide for this instance as a permitted activity. FF considers that the permitted activity standard should be strengthened

12.C.0.5 also prohibits the application of Farm Dairy Effluent and other similar contaminants to a conduit to water. Taken literally this would mean that the application of FDE to land over tile drains is a prohibited activity. We strongly agree that there are issues in respect to applying FDE over tile and mole drained land, however with careful application and low rates systems the risk to loss to water from tile drains can be adequately managed. Federated Farmers considers that by deleting conduit to water from the proposed rule then there is sufficient provision in ix *that enters water from land* to provide for any concerns where FDE is applied over or to a conduit that will discharge directly to a water body.

Relief Sought

Council amend Rule 12.C.0.5 to reflect below wording or similar:

12.C.0.5 Any discharge of contaminants from an animal waste system, silage storage or a composting process that results in more than minor adverse effects:

vi. To a water body; or
vii. To saturated land; or
viii. ~~To a conduit to water,~~ ~~or~~ To the bed of any lake or river, or Regionally Significant Wetland; or
ix. That enters water from land; or
x. ~~That results in ponding~~ **or alternately** *That results in ponding that causes or will cause the discharge to enter water*

Is a ***prohibited*** *activity*

3.9 Provision in the Proposed Plan Change

12.C.1.1 The discharge of sediment to water is a permitted activity, providing:

i. After the cessation of rainfall on the site, the discharge does not cause sedimentation.

ii. From 31 March 2017:

a. More than one hour after rain ceases on the site the discharge shall not exceed water clarity of 40 nephelometric turbidity units, where the discharge is about to enter water.

b. More than twelve hours after rains ceases on the site the discharge shall not exceed water clarity of 5 nephelometric turbidity units, where the discharge is about to enter water.

Submission

Federated Farmers opposes the above provision in part

Summary of Reasons for the Submission

Federated Farmers has concerns with the workability of this rule from a farm management perspective. There will be situations, where it is realistically and scientifically impossible to achieve the proposed standards.

Federated Farmers is also concerned as to the impact and flow-on effect of discharge or sediment from land above, or upstream from a particular farm.

Given the wide range in terrain, physical land-forms and farming types within the region, a one-size-fits-all rule is very difficult to implement, enforce and comply with from a plan user perspective.

Refer to further reasons outlined in submission on 12.C.0.4

The suggested amendments in the submission are to ensure that a farmer who has no sediment mitigation in place on a winter crop while the plan process continues is not in breach of the permitted activity status and to provide an interim approach to setting permitted activity standards on sediment loss until the provisions set out in the rule come into effect after 2017.

It is Federated Farmers view that the rule attempts to provide some "reality" to the fact that some sediment loss during rainfall from disturbed land will happen and that at higher flows that the effect of this sediment loss will be minor. It is our submission that careful consideration needs to be given as to how this rule will operate in practice and that an alternative measure of sediment loss after rainfall ceases would be more appropriate and enforceable over time.

Relief Sought

That Council adopt the rule with the following amendments

The discharge of sediment to water is a permitted activity, providing:

(i) From 31 March 2013 where land has been disturbed all reasonable steps are taken to avoid the discharge of sediment from land to water; and

~~*(ii)(i) After the cessation of rainfall on the site, the discharge does not cause sedimentation……*~~

(ii) From 31 March 2017…

3.10 Provision in the Proposed Plan Change

Rule 12.C.1.2

Submission

Federated Farmers supports in part Rule 12.C.1.2

Summary of Reasons for the Submission

Rule 12.C.1.2 and the associated schedule 16 are the key elements of the plan change. If the operation of this rule, the limits in the schedule and incentives for farmers to comply are not correct then the objectives of good quality water will not be met. Federated Farmers wholly supports the Councils innovative approach to setting limits and measuring them at the farm level, to that degree we support the proposed rule in principle. Until farmers have a real understanding of cause and effect of different land use practices, progress to reducing the effects of agriculture on water quality will be slowed, so its critical that the objectives policies and rules of the plan assist in achieving this link and result in actual change in practice at the farm level, where it is required.

At a theoretical level and principal level FF supports the approach taken in 12.C.1.2. However we have some fundamental concerns that have been outlined in the general submissions on the plan change at the start of this submission.

FF considers that the rule will be difficult to monitor, adequately report and enforce and that farmers at any one time will have difficulty in knowing whether or not they are compliant with the proposed rule. FF has serious reservations about the achievability of the limits which we outline in our submission on schedule 16.

It is our submission that it will be difficult for a farmer under the proposed rule framework to know whether or not they need to apply for resource consent under rule 12.C.2.1 from a measurement of water quality at a particular point in time without some averaging or longer term monitoring or established relationship in place and that the plan lacks adequate guidance on where a resource consent will be required.

The measurement and assessment of the discharges should be more consistent with the statistical water quality regime in the receiving water body and adjusted to ANZECC guidelines.

The measurement, indicated at 12 hours after rain has ceased we understand to provide for contaminant concentration losses in excess of those limits in schedule 16 during peak flows and rainfall where the effects of the increased concentration of nutrients and or Ecoli, on the receiving water body will be no more than minor. Under this prescription it will be difficult to consistently monitor or enforce or for farmers to measure the environment in any consistent cost effective manner.

Farmers need considerably more confidence in the technical robustness of the methodology associated with the Rule and schedule 16 and the measuring points of the nutrient loss

Decision Sought

Adopt Rule 12.C.1.2 with amendments to schedule 16

Provide for guidance on where a resource consent will be required where schedule 16 cannot be met

Include additional wording to the effect of

Where limits in schedule 16 are exceeded under this rule a resource consent is required under rule 12.C.2.1

3.11 Provision in the Proposed Plan Change

Rule *12.C.1.3*

Submission

Federated Farmers opposes Rules 12.C.1.3

Summary of Reasons for the Submission

Federated Farmers supports the permitted activity based approach to managing the discharge of Nitrogen to groundwater, but our members are concerned that the discharge limits set within Rule 12.C.1.3 is neither realistic nor achievable in many cases. In many cases in the Nitrogen sensitive zones the rule will simply but landowners out of business.

A landowner could quite reasonably consider themselves to be operating within the permitted activity framework at the time of discharge, without knowing precisely whether the OVERSEER calculation is being met until the actual figures are run through the model by a suitably accredited person. That OVERSEER records should be kept and provided to council upon request and verified by an accredited person

but that the input information should be administered by the landholder not the Council.

We also oppose a Rule referring to a specific version or type of software. Given the changes to, and likelihood of any version being superseded, it does not seem practical to refer specifically to OVERSEER Version 6.0 within the Plan. Further the current version of OVERSEER works well for pastoral farmers but is lacking precision in its estimated losses for irrigated land and for mixed use and cropping farmers.

Despite taking all reasonable precautions, farmers may find themselves retrospectively breaching these permitted activity rules.

The use of maximum permitted leaching rates for nitrogen is not an effects based regime and is inconsistent with the proposed plan change. A review of this approach should be made considering the receiving environment rather than a blanket catchment based approach. That is - "any absolute discharge from land and including groundwater (incorporating 12 C 1 2) should not exceed the cumulative median requirements as set out in an amended Schedule 16. Additionally, the discharge must be represented by the "difference" or change in water quality for the property under evaluation. This overcomes the problem of up-gradient cumulative addition of water quality parameter concentrations. Nitrogen sensitive zones and corresponding nitrogen loss limits should be removed from the proposed plan change.

If not then the limits for Nitrogen loss need to be higher and the phase in times much longer.

The rule as it is currently written needs to default to a restricted discretionary activity resource consent if the limits cannot be met in a similar way to those discharges that cannot meet the limits in schedule 16 to provide for a managed path to achieving the limits.

That if the rule proceeds then it needs to be based much more specifically on the receiving environment and the effect of discharge of N to that environment and the corresponding actual environmental effects.

That it is unclear as to the point of measurement, whether this is at a catchment level or a farm enterprise level or a per hectare level on any part of a given farming enterprise at any one time.

Relief Sought

That Council delete Rule 12.C.1.3 and replace with a modified rule relying on amended schedule 16 discharges.

Or

If the rule is adopted then the following amendments are made

Rule 12.C.1.3 states: *"The discharge of nitrogen[1] from land to groundwater, is a **permitted** activity, providing:*

(i) From 31 March 2019, calculated nitrogen leaching by the Council using OVERSEER® ~~version 6,~~ from any one farming enterprise does not exceed:

(a) ~~10~~ 30 kilograms nitrogen per hectare per year over any nitrogen sensitive zone identified in Maps I1-I6; and

(b) 50 ~~30~~ kilograms nitrogen per hectare per year elsewhere in Otago; and

(c) add additional limits based on the receiving environment and specific to catchments

(ii) Upon request, the person with responsibility for the management of the land supplies the Council ~~with all necessary annual input data to run~~ verified OVERSEER® records by an accredited OVERSEER operator ~~version 6.0."~~

Where limits in rule 12.C.1.3 are exceeded under this rule a resource consent is required under rule 12.C.2.1

3.12 Provision in the Proposed Plan Change

Rule 12.C.1.4

Submission

Federated Farmers supports in part Rule 12.C.1.4

Summary of Reasons for the Submission

Federated Farmers supports a permitted activity approach to the land application of contaminant from any animal waste system. In line with the submission on prohibited activities Federated Farmers also seeks that permitted activity standards provide guidance on good practice for the application of these contaminants to land.

Decision sought

Adopt rule with amendments to ensure that the plan provides a framework for compliance certainty around the safe application of these contaminants to land

Where permitted activity standards are exceeded under this rule a resource consent is required under rule 12.C.2.1

3.13 Provision in the Proposed Plan Change

Rule 12.C.1.5

Submission

Federated Farmers opposes Rule 12.C.1.5 in part.

Summary of Reasons for the Submission

It is not clear how this rule will be administered or to what degree it covers watercourses discharging into water or artificial watercourses and drains at the point of discharge into a receiving water body. FF accepts that all discharges to water should have to meet acceptable limits, however there are a number of instances where drains pass through multiple properties and unless there is a consent held for the discharge from the drain by an entity then it will be impossible to administer or enforce. This is of particular concern for properties that neighbour receiving water such as regionally significant wetlands or lakes or where the drains discharging into these water bodies terminate at their property.

The previous submissions in respect to the provisions around regionally significant wetlands apply to clause (a) of this rule. If a drain (or any water) is discharging into a regionally significant wetland then it will have an effect on its water level.

Federated Farmers considers that if a discharge under this rule cannot meet schedule 16 then it should be subject to the requirement for a resource consent under 12.C.2

Decision sought

Council amend the rule to provide certainty on how the rule will be enforced or monitored

Council delete the provision relating to the change in water level of a regionally significant wetland

Where limits in rule 12.C.1.5 are exceeded under this rule a resource consent is required under rule 12.C.2.1

3.14 Provision in the Proposed Plan Change

Rule 12.C.1.6

Submission

Federated Farmers supports in part Rule 12.C.1.6

Summary of Reasons for the Submission

Federated Farmers supports the provision for discharge from farm dams as permitted activities. However we consider that provision should be made for innovation in respect to the collection of water from flood based irrigation systems and the reapplication of that water to land.

Relief Sought

Council adopt the rule but provide for the storage of water applied for the purposes of irrigation and the application of that water subject to the rules in the plan and the site standards of Rule 12.C.1.6

3.15 Provision in the Proposed Plan Change

Rule 12.C.2.1

Submission

Federated Farmers supports in part Rule 12.C.2.1

Summary of Reasons for the Submission

Rule 12.C.2.1 provides a restricted discretionary activity status requiring resource consent for where either the discharge of contaminants to land listed in Schedule 16 has not been successfully met. In line with our submissions in respect to Rules under 12.C.1 – 6 Federated Farmers considers that the discharges managed by those rules should also default to a restricted discretionary consent where they cannot meet the site standards of a permitted activity.

Federated Farmers considers this rule should apply to all discharges. It will be too difficult to determine where such discharges took place prior to 31 March 2012 and the nature and or scale of those discharges. The time bound provision should therefore be deleted.

Federated Farmers strongly supports the provision that precludes council from publicly notifying consents under this rule.

It is entirely appropriate that where the proposed limits cannot be met in the time frames outlined that a consent is required to undertake agreed steps toward meeting the limits over an agreed time frame.

Relief Sought

That Council adopt the rule with amendments.

That Council delete the words ~~*and the discharge first occurred prior to March 2012*~~

That Council include either in a separate rule or provide in this rule provision for resource consent for all activities permitted under 12.C.1

3.16 Provision in the Proposed Plan Change

13.1.1.1 – The use of any structure that is fixed in, on, under or over the bed of any lake or river, or Regionally Significant Wetland is a permitted activity providing:

.....

(ba) Animal waste is prevented from entering the water body; and

Submission

Federated Farmers opposes rule 13.1.1.1(ba) in part.

Summary of Reasons for the Submission

Federated Farmers supports the permitted activity approach to structures. Federated Farmers concern is that due to the strict wording of this rule, that the prevention of animal waste entering the water body will not be achievable despite reasonable precautions being taken. There may be instances where there is unavoidable one-off or minimal animal waste passed from stock off the side of a bridge during a crossing.

The use of any structure in such circumstances is still far preferable, and will ensure substantially less adverse effects than otherwise crossing the waterway.

It is more appropriate for the rule to ensure appropriate steps and precautions are taken to minimise animal waste entering waterways during stock crossings over a structure.

Relief Sought

Council amend Rule 13.1.1.1(ba) to reflect below wording or similar:

(ba) All reasonable precautions are taken to ensure animal waste ~~is prevented from~~ entering the water body is avoided.

3.17 Provision in the Proposed Plan Change

13.1.2 [no change]

Submission

Federated Farmers supports Rule 13.1.2 in part – with suggested wording change

Summary of Reasons for the Submission

Rule 13.1.2 provides a restricted discretionary activity status requiring resource consent for the use of a structure in circumstances where Rule 13.1.1.1 is not met.

This rule is not included within changes under Proposed Plan Change 2 (Regionally Significant Wetland).

Given Proposed Plan Change 6A's inclusion of Regionally Significant Wetlands within the permitted activity rule of 13.1.1.1 it is appropriate for these to also be included within circumstances falling outside Rule 13.1.1.1 criteria.

Relief Sought

Council amend Rule 13.1.2 to ensure appropriate inclusion of Regionally Significant Wetlands

13.1.2 Restricted discretionary activities: Resource consent required

13.1.2.1 Except as provided for by Rule 13.1.1.1, the use of a structure that is fixed in, on, under, or over the bed of any lake or river, or Regionally Significant Wetland, is a restricted discretionary activity.

3.18 Provision in the Proposed Plan Change

13.2.1 The erection or placement of a structure: Permitted Activities: No resource consent required

Submission

Federated Farmers supports Rule 13.2.1

Summary of Reasons for this Submission

Federated Farmers supports Council extending permitted activity rules in regard to the erection or placement of single span bridges over the bed or a lake, river or regionally significant wetlands, of boardwalks over Regionally Significant Wetlands and for any other crossing in or on the bed of a lake or river.

Such structures will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, given the form the bridge, boardwalk or other crossing must take under Rule 12.3.1.

Relief Sought

That Council adopt rule 13.2.1 as proposed

3.19 Provision in the Proposed Plan Change

13.3 – The repair, maintenance, extension, alteration, replacement or reconstruction of a structure

Under Proposed Plan Change 6A it is noted that there is [no change] to 13.3.1

Submission

Federated Farmers supports these rules in part – along with suggested word changes

Summary of Reasons for this Submission

Previous rules made no reference to repair or maintenance of such structures within the rule heading so these activities are now appropriately included.

Under Proposed Plan Change 6A it is noted that there is *[no change]* to the permitted activity rules within Rule 13.3.1. Given that regionally significant wetlands are specifically referred to within the permitted activity rules of 13.2 (erection or placement of a structure) it is appropriate for them to be expressly included within

permitted activity rules surrounding any repair, maintenance, extension , alteration, replacement or reconstruction of such lawful structures.

Federated Farmers seeks to ensure these are appropriately included within Rule 13.3.1 either under Proposed Plan Change 6A or under Proposed Plan Change 2 (Regionally Significant Wetlands)

Relief Sought

Council adopt Rule 13.3.1 as proposed alongside inclusion of reference to Regionally Significant Wetlands.

3.20 Provision in the Proposed Plan Change

13.3.2.1 (m) How any animal waste will be prevented from entering the waterway.

Submission

Federated Farmers supports this rule alongside suggested word changes below

Summary of Reasons for this Submission

Consideration (m) above, is amongst the matters Council may restrict the exercise of its discretion to, when considering any resource consent under Rule 13.3.2.1.

Federated Farmers accepts that animal waste entering waterways should be avoided. However, we consider it more appropriate for Council to consider what reasonable precautions farmers will take to ensure such waste entering waterways is minimised or prevented. This is a more realistic and achievable consent consideration.

Relief Sought

Council amend the wording of Rule 13.3.2.1(m) to the following wording or similar:

13.3.2.1 (m) Precautions taken to ensure animal waste entering water is minimised or prevented.

3.21 Provision in the Proposed Plan Change

Rule 13.5 Alteration of the bed of a lake or river, or of a Regionally Significant Wetland.

13.5.1.1….. is a permitted activity providing:

(e) The time necessary to carry out and complete the whole of the work within the wetted bed of the lake or river does not exceed 10 ~~consecutive~~ hours in duration.

13.5.1.2(c) same wording as 13.5.1.1(e)

13.5.1.3(c) same wording as 13.5.1.1(e)

13.5.1.4(c) same wording as 13.5.1.1(e)

Submission

Federated Farmers supports in part the proposed changes to rules 13.5.1- 4

Summary of Reasons for this Submission

10 hours is arbitrary. It should be about the cumulative effects of the activity on the bed of the water body. A more appropriate reflection of the time to undertake some of these works is 20 hours. This would provide for approximately three working days.

Relief Sought

Amend time to 20 hours throughout rules

3.22 Provision in the Proposed Plan Change

Rule 13.5.1.1

f) All reasonable steps are taken to minimise the release of sediment to the lake or river during the disturbance, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of ~~250~~ 100 metres downstream of the disturbance; and .....

Rule 13.5.1.2 (d) same wording as 13.5.1.1(f)

Rule 13.5.1.3 (d) same wording as 13.5.1.1(f)

Rule 13.5.1.4 (d) same wording as 13.5.1.1(f)

Submission

Federated Farmers opposes this provision in part

Summary of Reasons for this Submission

Under Proposed Plan Change 6A there is a considerable drop from a 250 metre distance change in clarity to 100 metres. Federated Farmers is concerned with this dramatic reduction by over 50% in allowed change in mixing zone, without understanding the actual improvement in water quality as a result.

Relief Sought

Council adopt the rule and retain 250 metre mixing zone for visual clarity.

3.23 Provision in the Proposed Plan Change

Rule 13.5.1.8A Permitted Activities: No Consent Required

Submission

Federated Farmers opposes this rule in part.

Summary of Reasons for this Submission

Federated Farmers strongly supports providing for stock access to water as a permitted activity.

Farmers will endeavour to fence waterways, provide alternative shade options and increase slope stabilisation where this is feasible. However, for hill country farms in particular, the practicalities of steep gullies, flash flooding and invasive noxious weeds means it is impractical to fence off all waterways and ensure no stock access. There are also situations where stock will require access to waterways for drinking purposes and where it will be completely impractical to install crossings or where beds of rivers are gravel based but there will be minor colour changes where stock cross rivers.

Given the unique terrain, climate and land use combinations of hill country farms within the region, there is no one-size-fits-all environmental solution to individual situations.

Relief Sought

Council adopt Rule 13.5.1.8A with amendments as per below

The disturbance of the bed of any lake…

(d) increase the colour or reduce the visual clarity <u>after 100m</u>

3.24 Provision in the Proposed Plan Change

<u>13.5.1.8B The disturbance of the bed of any lake or river, or Regionally Significant Wetland, by livestock due to seasonal muster, is a permitted activity, providing it does not cause or induce slumping, pugging or erosion.</u>

Submission

Federated Farmers supports in part Rule 13.5.1.8B

Summary of Reasons for this Submission

Musters are a crucial part of many hill country farming operations. Such mustering is usually planned and revolves around key seasonal farming requirements, such as livestock health checks and treatments, branding, shearing, lamb marking and sale-time. It can however, also involve extra-ordinary activities that may occur at certain times of the year, such as removing stock in danger from extreme weather events or for health issues such as a fly strike outbreak.

Because of the wide variety of terrain, accessibility, farm type and climate of high country farms within the Otago region, it is difficult for there to be a specific definition as to what a seasonal muster can be. For the same reasons, there cannot be a 'one-size-fits-all' rule as to when such seasonal activities should occur. It is more appropriate to provide for the occasional movement of stock across water for the purposes of mustering(as opposed to regular crossing)

Relief Sought

Council adopt Rule 13.5.1.8B as proposed with amendments

The disturbance of the bed of any lake or river.. by livestock due to a ~~seasonal~~ muster, is a permitted activity…

3.25 Provision in the Proposed Plan Change

13.5A Entering onto or passing across the bed of a lake or river, or a Regionally Significant Wetland

13.5A.0 Prohibited activities: No resource consent will be granted

13.5A.0.1The entering onto or passing across the bed of any lake or river, or any Regionally Significant Wetland by livestock, for the purpose of moving livestock from one location to another:

a) Excluding the use of any authorised structure over water and the bed of any lake or river, or any Regionally Significant Wetland;

and

b) Excluding seasonal muster

Is a prohibited activity.

Submission

Federated Farmers opposes Rule 13.5A.

Summary of Reasons for this Submission

While Federated Farmers supports Council's fundamental objective of maintaining and improving water quality over time within the region, we consider Rule 13.5A.0's prohibited activity status both unworkable and unrealistic, particularly for hill country sheep and beef farmers. The proposed rule either results in a permitted or a prohibited status and we consider a middle ground is also needed.

There will be many instances where crossing stock across the specified waterways is essential to a farming operation and where constructing a structure over the waterway is neither practicable nor cost-effective, particularly in the case of some of the flood-prone rivers within the region.

We've had feedback from numerous farmers particularly those who farm in extensive hill country areas where waterway crossings have been carried out over many years without any adverse impact on the waterway. It makes sense for stock and farmer safety along with waterway health to ensure crossings are over parts of the waterway that are gravel based and firm, or over concrete blocks over the bed, and as a result, stock crossings in the past have caused no obvious and on-going erosion, slumping or pugging in these areas.

While many crossings will be covered by the 'seasonal musters' exception within Rule 13.5A.0.1(b), a more practical and user-friendly approach would be to alongside the permitted activity status, provide an additional activity status, requiring consent, that strikes a balance between achieving environmental objectives and ensuring farming operations are not unreasonably affected.

We acknowledge that where adverse environmental effects are very likely, Council should have the power to decline a resource consent application or preferably seek conditions that provide certainty that any effects arising from the activity will be appropriately managed by the consent holder.

We consider that Council can appropriately exercise discretion whether or not to grant consent, and/or to impose conditions and achieve the objectives of Rule 13.5A.0 where the activity is categorised as restricted discretionary.

Relief Sought

Council amend Rule 13.5A.0 as follows:

13.5A Entering onto or passing across the bed of a lake or river, or a Regionally Significant Wetland

13.5A.0 Prohibited activities: No resource consent will be granted

13.5A.0.1The entering onto or passing across the bed of any lake or river, or any Regionally Significant Wetland by livestock, for the purpose of moving livestock from one location to another:

a) Excluding the use of any authorised structure over water and the bed of any lake or river, or any Regionally Significant Wetland;

and

b) Excluding seasonal muster

Is a ~~prohibited activity~~. restricted discretionary activity

3.26 Provision in the Proposed Plan Change

Schedule 15

Submission

Federated Farmers opposes schedule 15 in part

Summary of Reasons for this Submission

Schedule 15

It is fundamentally important to define water courses or natural waterways including depressions for flood ways as opposed to modified waterways including farm drains, tile drains and buffer zones. This should be presented within the Schedule to provide clarity as to which waterways in particular are captured under Schedule 15 or that fall into off farm discharges which require limits under Schedule 16. The former is particularly important with regards to dissolved oxygen, turbidity and coliform bacteria measurement and compliance.

The approach given in Schedule 15 is generally supported with the use of ANZECC guidelines and appropriate measurement and reporting methodologies that are scientifically based and proven. In addition, catchment specific issues need to be taken account of (e.g. Shotover River sediment, Deborah Volcanic Aquifer nitrate). Such environments may be afforded exemption as is the case with the Shotover River.

The proposal for "good" water quality is based on ANZECC Guidelines 2000. The default condition is the median result for a range of parameter monitoring at a specific site. That monitoring is required to be robust and reflective of a catchment in areas that are defining upland or lowland water quality.

However the Schedule 15 receiving water quality standards are not all consistent with ANZECC. For example, turbidity in lowland streams is 5.6 ntu and not 5 ntu, EColi is 260 cfu/100 mL and the department of health requirement is 126 cfu/100 mL. In the case of DRP, the parameter may be reflective of the bio-available phosphorus within TP which is 0.033 mg/L for downland modified waterways. As such there needs to be consistency with ANZECC for 6A, or the basis for any departure requires a much fuller explanation as to why.

In addition ANZECC specifies Dissolved Oxygen (DO) of 80% saturation for downland waterways which should be included in default parameters listed for receiving environments. It is requested that receiving environment parameters be corrected to appropriate ANZECC guidelines to reflect consistency with internationally accepted water quality requirements.

In assessment of a good quality water for the receiving environment the nationally adopted MFE monitoring and reporting regime should be strictly adhered to, that is, the median value of 5 of the 6 variables (DO, EColi, Turb, DRP, Ammonia and Nitrate) must comply with the relevant guideline value and DO must comply. This methodology is also incorporated within Otago Regional Council state of environment monitoring protocol. Currently the 6A standards do not include DO and do not allow for a single variable to be noncompliant whilst still meeting a "good" water quality standard. This is inconsistent with accepted national practice.

Catchments listed in Schedule 15 also do not reflect appropriate upland and lowland classifications according to ANZECC. A particular case is the Kakanui River which is an upland stream in the upper catchment but is lowland in the balance of the catchment. Tributaries and land within the lower catchment should be reflective of the water quality criteria according to the ANZECC classification for lowland areas within Schedule 15 and for (associated) appropriate limits for discharge within Schedule 16.

There are catchments that do not flow to the coast or that are sub-catchments of Otago waterways. It is unclear how these catchments will be managed. The amended proposal below may be applied in resumption of this point. Also another example is the Waiareka catchment, which must be considered separate to Kakanui as it is a lowland stream and discharges to the Kakanui Estuary. Thus, this example identifies that monitoring would be difficult to encapsulate the water quality median of both catchments from a single combined monitoring site. There are other examples of

catchments where monitoring may be problematic in support of the 6A proposal for Schedule 15 limits.

As above, planning maps must be updated to indicate discharge limit areas 1 and 2 to more appropriately reflect ANZECC descriptions and the state of the receiving water body. In all the ANZECC based approach for receiving water quality limits is supported – but with the use of the appropriate limits in the appropriate areas. Monitoring and reporting is also required to be consistent with the methodology for nationally accepted descriptions of "good" water quality.

Relief Sought

Amend Schedule 15. Amend limits and increase transition times. Review catchment and sub catchment classification.

3.27 Provision in the Proposed Plan Change

Schedule 16

Submission

Federated Farmers opposes in part schedule 16

Summary of Reasons for this Submission

Schedule 16

Based on water quality data for receiving stream environments (main stems of waterways) and contributing sub-catchment waterways including minor sub-catchment discharges, the proposed limits are unlikely to be complied with at the off farm level irrespective of the receiving environment classification. That is, the limits cannot be complied with even in "good" water quality catchments. Additionally, difficulties arise in both the practicality, measurement and statistical presentation and scientific justification of the methodology given in 6A.

Water quality parameters in off farm discharges must be able to reflect ANZECC guideline medians for upland and lowland catchments over the discharge regime. It is accepted that DO may be difficult in terms of parameter compliance and measurement. Under the current proposal there is a difficulty in establishing a connection between an appropriate median for "good" water quality in the receiving environment and the measurement and reporting of the discharge as presented in the proposal.

Additionally it is suggested that Schedule 16 is modified to incorporate the resultant off farm discharge as a median increase in water quality from a landholding, and to include surface water and groundwater components. This provides connect between long term median good water quality of the receiving waterbody environment and the discharge of water off farm. The surface water parameters may not include DO, but should be consistent with the balance of the parameters listed in Schedule 16. Groundwater parameters should only include nitrate (as NNN) which can be undertaken with the use of Overseer coupled to the existing groundwater environment. Such an annual or seasonal nitrate contribution may be added to the median results for off farm water quality in terms of compliance with Schedule 16.

The requirement for revised mapping of upland and downland areas relating to water quality areas 1 and 2 are also applicable to Schedule 16. The existing areas 1 and 2 are not detailed correctly according to ANZECC and insufficient information is provided as to how these have been stipulated.

The off farm discharges as above may be representative of medians or be converted to an equivalent median water quality result for comparative monitoring. That is,

comparison of receiving environment water quality to derive an appropriate percentile statistic for off farm water quality results taken at any location at any time over any period. Any off farm discharges during events may be measured and appropriately adjusted to represent true median levels – in comparison to the receiving environment. It is critical at this stage of the proposal that at least sound methodology in the wording of compliance limits and the statistical approach being used is stipulated.

The proposed (existing) method uses median water quality for the receiving environment, however, it is unknown what equivalent percentile water quality is represented by the discharge water quality for the proposed monitoring regime.

Under the modified Schedule 16 option above, a useful reverse sensitivity will occur whereby council and community will be able to identify outlying discharges that are inconsistent with median state or adjusted median state of the receiving environment water quality. This is a sound scientific and statistical approach to allow measurement and compliance with ANZECC water quality guidelines.

Relief Sought

Council amend schedule 16. Amend limits and increase transition times.

3.28 Provision in plan change

Glossary – definition of Fertiliser

Submission

Federated Farmers opposes the current definition of Fertiliser

Relief Sought: Federated Farmers seek the definition of *'fertiliser'* included in PPC6A to be replaced with the following definition which is better aligned to the definition used in the regulations of the Agricultural and Veterinary Medicines Act, Code of Practice for the Sale of Fertilisers and Code of Practice for Nutrient Management:
"Fertiliser—
(a) means a substance or biological compound or mix of substances or biological compounds that is described as, or held out to be suitable for, sustaining or increasing the growth, productivity, or quality of plants or, indirectly, animals through the application to plants or soil of—
(i) nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, chlorine, and sodium as major nutrients; or
(ii) manganese, iron, zinc, copper, boron, cobalt, molybdenum, iodine, and selenium as minor nutrients; or
(iii) fertiliser additives; and
(b) includes non-nutrient attributes of the materials used in fertiliser; but
(c) does not include substances that are plant growth regulators that modify the physiological functions of plants"
[Source: *3 Interpretation; Agricultural and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011*]

3.29 Section 32 Report – Consideration of alternatives costs and benefits

Submission

Federated Farmers considers that the Section 32 analysis is not comprehensive enough and does not provide sufficient justification for the adopted approach

Reasons for submission

Presents criteria that should reflect "good" water quality in the Otago Region – the report does not present the reasons for the changes made from that recommended by ANZECC. The approach must be consistent with ANZECC, which it is not. The methodology for determining good water quality and associated compliance is similar to but inconsistent with ANZECC.

An effects based approach is not supported with the use of blanket leaching limits for nitrogen.

The strategic approach focuses on discharge from land to water, but does not take into account groundwater discharge in the overall calculation of compliance with Schedule 16. Groundwater contribution by default is included in parameters set for Schedule 15.

Assessment of cumulative effects has not been adequately accounted for in methodologies as there is no mandate for single property compliance based on water quality differentials between farms and sub catchments. The removal of reasonable mixing is inconsistent with the effects based approach taken.

A clear inconsistency and misinterpretation of the national indicators of freshwater quality based on ANZECC has been made – rural diffuse discharges cannot always comply with the national indicators for freshwater quality. Thus the approach must be modified to take this into account.

There is inconsistency with defining maximum contaminant limits in discharges and enforcement of such discharges to the receiving environment median "good" water quality limit – this has no scientific basis.

A minimum of five years transition time to comply with the receiving water standards and the discharge limit standards is considered appropriate.

Overall in the s32 Report there is no detailed analysis of the proposal and how the regime may be put into practice. This does not allow individuals to gauge environmental or financial implications. No data or scenarios are given and no actual cases or models are presented – thus, there is no certainty in the proposal. No detailed analysis of other methods is given.

About Federated Farmers of New Zealand

Federated Farmers of New Zealand (Inc) is a voluntary, primary sector organisation nationally representing a majority of farming members and their families. Federated Farmers has a long history of representing the needs and interests of New Zealand's farming communities, primary producers and agricultural exporters.

The Federation aims to add value to its members' farming business by ensuring that New Zealand provides an economic and social environment within which our members may operate their business in a fair and flexible commercial environment.

The Federation operates under a voluntary membership and is only relevant to those members if it is effectively communicating with them and representing their views.

Federated Farmers operates under a provincial elected structure where each year representatives are elected at an Annual General Meeting. These representatives form the basis of a provincial executive that governs the province. Members communicate through this system and directly with staff to inform the Federations position on any given plan or policy statement.

Proposed Plan Change 6A (Water Quality)

to the Regional Plan: Water for Otago

Decisions of Council

Otago Regional Council resolved to adopt the recommendations of the Hearing Committee on Proposed Plan Change 6A (Water Quality) at its meeting on Wednesday 27 March 2013, as follows:

That Council:

1. *Adopt the recommendations of the Hearing Committee on Proposed Plan Change 6A (Water Quality) to the Regional Plan: Water for Otago with tabled amendments as its decision;*
2. *Publicly notify its decisions on Proposed Plan Change 6A (Water Quality) to the Regional Plan: Water for Otago on Saturday 20 April 2013; and*
3. *Notify submitters of its decision.*

All references to the recommendations of the Hearing Committee must now be read as being the decisions of Council in the following report.

Otago Regional Council

20 April 2013

Abbreviations

NPSFW	National Policy Statement for Freshwater Management 2011
ORC	Otago Regional Council
Proposed plan change / plan change	Proposed Plan Change 6A (Water Quality) to the Regional Plan: Water for Otago
RMA	Resource Management Act 1991
Section 32 report	The report assessing alternatives, benefits and costs for proposed plan change 6A to the Water Plan as required by Section 32 of the RMA
SOE	State of the Environment (monitoring undertaken in accordance with Section 35(2) RMA)
Water Plan	Regional Plan: Water for Otago

Scientific abbreviations

DRP	Dissolved reactive phosphorus
E coli	*Escherichia coli*
mg/l	Milligrams per litre
N	Nitrogen
NH_4	Ammoniacal nitrogen
NNN	Nitrate-nitrite nitrogen
NTU	Nephelometric turbidity units
TN	Total nitrogen
TP	Total phosphorus
cfu/100 ml	Colony forming units per 100 millilitres
KgN/ha/yr	Kilogram of Nitrogen per hectare per year (annual nitrogen leaching rate)

Note: use of section/Section:

section	A reference to another section in this report. A reference to a section of the Water Plan.
Section	A Section of the RMA.

Note: text marking

~~Operative word~~ / notified word	Notified change, showing change proposed from the Water Plan
~~Notified word~~/amended word	Amendment recommended in this report
blue italics	Changes to the operative Water Plan made by Proposed Plan Change 2 (Regionally Significant Wetlands)

This report presents the recommendations of the Hearing Committee to the Otago Regional Council on submissions and further submissions to Proposed Plan Change 6A (Water Quality) to the Regional Plan: Water for Otago.

Hearings Committee:

Councillor Duncan Butcher

Chairperson

Councillor David Shepherd

Clive Geddes (Independent commissioner)

20 March 2013

Background

Proposed Plan Change 6A (Water Quality) proposes an effects-based approach to managing rural discharges to water, with a focus on controlling contaminant discharges, rather than the land use activities that create them. Discharge limits are set for common rural contaminants, and discharges which meet those limits are permitted. Land managers have the flexibility to meet the discharge limits in the way that best suits their operation.

The proposed plan change was publicly notified in the Otago Daily Times on Saturday 31 March 2012, and submissions closed on Tuesday 2 May 2012. A total of 334 submissions were received, seven of which were received after the formal submission period. Three submissions were deemed invalid in their entirety as they were not on the plan change.

The *Summary of Decisions Requested* and request for further submissions was notified on Saturday 2 June 2012, with further submissions closing on Monday 18 June 2012. There were 77 further submissions received, two of which were received after the formal further submission period. Time limits were waived for all late submissions and further submissions, under delegated authority.

The *Officer's Report on Decisions Requested,* which evaluated decisions requested by submitters and further submitters, and made recommendations to the Hearing Committee, was released on 22 August 2012. Further technical information supporting the plan change was released on 29 August 2012.

The Hearing Committee heard evidence from 171 submitters and their representatives over 22 days between Monday 10 September 2012 and Thursday 25 October 2012 at Dunedin, Balclutha, Wanaka, Alexandra, and Oamaru.

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CHAPTER 1 – EXECUTIVE SUMMARY

1.1 Introduction

We thank all of those people who have participated in this plan change process. We have spent considerable time reading submissions, listening to evidence presented at the hearing, questioning submitters and deliberating on matters raised.

In preparing our recommendations we have been mindful of the Otago Regional Council's statutory responsibilities under the Resource Management Act 1991 (RMA), the National Policy Statement on Freshwater Management 2011 (NPSFW) and the Regional Policy Statement for Otago (RPS). The vires of the plan change was challenged directly and indirectly by submitters. Legal advice was taken and we consider that the arguments raised are matters of merit rather than law.

The matters raised by submitters on plan change 6A broadly related to:

- Achieving good quality water;
- The scope of the plan change;
- The merits of the effects-based approach;
- The permitted-prohibited rule structure;
- Contaminant discharge limits;
- The time needed to make changes to land management practices;
- Consent options;
- Discharges that involve "passing water" through;
- Compliance and enforcement; and
- Working collaboratively to achieve water quality objectives.

We considered each of these matters before making detailed recommendations.

1.2 Key messages

- **Achieving good quality water**

Good quality water is fundamental to our economical, environmental, social and cultural wellbeing. Submitters consistently voiced support for the general principle of having good quality water. However, they voiced different views about the value of the proposed narrative description and scientific standards, the appropriateness of those standards for different catchments and whether good quality water should be achieved in Otago.

We consider that the narrative description is useful in providing a common understanding of what constitutes good quality water. This helps people monitor water quality for themselves. We clarify how these characteristics are assessed and provide a better link with the contaminant discharge limits in the rules.

- **The scope of the plan change**

A number of submitters were concerned that this plan change would set a precedent for their point source discharge activities. The operative Water Plan already regulates discharges of human sewage, pesticides, herbicides and other specified contaminants, and water from reticulated stormwater systems and roads. Generally, these matters were not the subject of this plan change, and it is inappropriate to speculate on the nature and form of any future plan change.

- **Retain and improve the effects-based approach**

The effects-based approach set out in the notified plan change is broadly supported by the community. However some submitters preferred land use activity regulation, or taking a whole-catchment approach to discharge management.

We consider that the alternative approaches are more complex, are likely to involve greater costs for all parties, and may involve the community dictating to land managers how they will manage their landholdings.

The effects-based approach fosters individual responsibility for discharges. It encourages land managers to become more aware of the effects of their land management practices on water quality, and to change those practices where needed. Land managers can manage their activities as they wish, as long as they do not breach the limits set within the Plan. The changes we recommend build on this approach.

- **Clarify the permitted - prohibited rule framework**

A number of submitters opposed the use of prohibitions, preferring that activities be permitted or subject to consent.

We consider that there are gross discharges which are so objectionable that they would never be granted resource consent. We have re-classified some discharges as permitted, subject to conditions, and reduced the number of permitted activity rules. We are satisfied the operative provisions provide for capture dams.

- **Review the contaminant discharge limits**

The proposed plan change focuses on the most common contaminants in rural discharges, their different transport mechanisms from land to water, and the interactions between those contaminants. We received a large number of submissions on the contaminant limits proposed. Those opposing considered that the science was not good enough, and that more research was required at both property and catchment level, before setting limits. They also considered that use should be made of mixing zones and the assimilative capacity of the receiving water.

We recommend changes to Schedule 16 contaminant discharge limits and set these relative to river median flows rather than rainfall events. This provides for some contaminant assimilation where the contaminant enters water.

- **Allow time for land managers to change their land management practices**

The timeframes for compliance with the contaminant discharge and nitrogen leaching limits have been extended to allow landholders to change their management practices.

We acknowledge that some activities, such as forestry, will need to change their discharge management practices, and re-assess their industry best management practices to achieve environmental outcomes.

- **Provide clear consent options**

The notified plan change did not explicitly provide for all the consent options where the permitted rules were not satisfied.

We describe the consent options and also give consenting guidance through the policies and discretions listed. We recommend consent durations which will encourage land managers to meet permitted activity conditions.

- **Clarify the "passing through" provisions**

We consider that where a race or dam operator has not caused the contaminant to be discharged into the race or dam from which he/she discharges, that water should be able to be "passed through" without meeting contaminant discharge limits. We also consider that for large consented dams, which were not the focus of this plan change, the operative provisions are satisfactory and should be retained.

- **Compliance and enforcement**

Although compliance and enforcement is not a matter that this committee can direct, we advise that for this plan change to be successful, a pragmatic approach to the enforcement of the plan change is needed. The cooperation between the Council and the community will be essential.

The contaminant discharge limits and the nitrogen leaching limits cannot be enforced before those limits come into force in 2020. However, compliance and enforcement action may continue to be taken for discharges with gross effects.

- **Collaboration is crucial to achieving water quality objectives**

Many submitters recognised that for this plan change to be effective in achieving water quality objectives, the community and the Otago Regional Council must work together.

Collaboration is crucial to the success of the plan change. We recommend that the Otago Regional Council consider the adoption of the implementation programme attached as Appendix 3.

We also recommend that an "Oversight Group" should be created. This will help the Otago Regional Council determine appropriate education programmes and enforcement actions, given the water quality challenges in different areas of Otago.

The Otago Regional Council should immediately update educational material and brochures on the plan change provisions, and on land management practices that help to achieve good water quality.

The Otago Regional Council should also provide information on sampling methods, materials, and suppliers of these materials. Continuing cooperation between land managers and the involvement of landcare groups should be encouraged.

The Otago Regional Council should continue water quality monitoring, and strengthen the programme to clearly identify water quality trends and assess aquifers' sensitivity.

1.3 Recommendations

(a) To amend Proposed Plan Change 6A (Water Quality) in order to give better effect to the intent of maintaining and improving water quality.

(b) To make changes as recommended in this report and as shown in Appendix 1.

(b) That the Otago Regional Council considers the adoption of an implementation strategy for Proposed Plan Change 6A (Water Quality), as shown in Appendix 3.

CHAPTER 2 – OBJECTIVES AND POLICIES FOR WATER QUALITY

The notified objectives and policies clarified the outcomes sought by the Otago Regional Council. They set the freshwater objectives for Otago relative to water quality, and the overall approach that was adopted to meet these objectives. Specific policies were notified to guide the consenting process.

2.1 Objectives for water quality

The first two notified objectives focused on attaining good water quality in Otago lakes, rivers, wetlands and groundwater. The third objective covered the role of the community in this achieving this.

We have considered the submissions and recommend that the notified objectives be amended in order to provide clarity.

2.1.1 Recommendations

(a) Amend notified Objective 7.A.1, in order to clarify the intent of Plan Change 6A:

> ~~7.5.1~~7.A.~~1~~2 **To enable the discharge of water or contaminants to water or land, in a way that maintains ~~maintain or enhance the~~ ~~have good~~ water quality ~~of water in Otago's~~ ~~lakes and rivers~~ ~~water bodies that~~ ~~so that it is suitable to~~ and supports ~~their~~ natural and human use values ~~and people's use of water~~.**

(b) Amend notified Objective 7.A.2, in order to provide more clarity:

> 7.A.~~2~~1 **To maintain ~~good quality water in Otago's water bodies,~~ water quality in Otago lakes, rivers, wetlands, and groundwater, but ~~and~~ enhance water quality where ~~necessary~~ it is degraded.**

(c) Amend notified Objective 7.A.3, in order to provide more clarity:

> 7.A.3 **To have individuals and communities ~~recognise and~~ manage the effects, including cumulative effects, of their activities on water quality~~, including cumulative effects~~.**

2.1.2 Reasons

- **Maintaining or enhancing water quality**

New Objectives 7.A.1 and 7.A.2 emphasise that existing water quality will be maintained or improved where it is degraded. This gives effect to Section 69(3) RMA, Objective A2 NPSFW, and Objective 6.4.4 and Policy 6.5.5 RPS.

Schedule 15 describes in narrative terms and as numerical standards "good quality water". See section 2.2 of this report .This phrase does not need to be stated in the Objectives.

The term "degraded" in new Objective 7.A.1 provides more guidance than the notified wording. Water is considered degraded when Schedule 15 standards are not met.

- **Enabling discharges with acceptable effect**

Using water to dispose of waste has socio-economic benefits. However such disposal must be done in a way that is compatible with the other uses and values of water.

- **Freshwater values and sustainable management of resources**

In Chapter 5, Policy 5.4.2, the Water Plan uses the concept of "natural and human use values" and prioritises avoidance of adverse effect on those values. Policy 5.4.3 prioritises avoidance of adverse effects on existing lawful uses.

The freshwater values in the NPSFW are consistent with the maintenance of Otago's natural and human use values.

- **Responsibility for good quality water**

Under Section 17 RMA every person has a duty to control the adverse effects of their activity on the environment. Amendment of Objective 7.A.3 clarifies these responsibilities for individuals and communities.

ORC's actions for enhancing water quality in Otago are set out in ORC's Annual Plan. These actions include monitoring and enforcement. These are included as ORC's duties under Section 30 RMA, and do not need to be specified in an Objective.

- **Scope of objectives**

Schedule 15, short-term discharges, and the effect of abnormal flows, are better dealt with in policies and rules, rather than in the objectives.

- **Coastal water**

This plan change gives effect to the NZ Coastal Policy Statement 2010 to the extent that it addresses contaminant discharges which may affect coastal water quality.

- **Clarity**

The phrases "recognise and manage" in notified Policy 7.A.3 and "where necessary" in notified Policy 7.A.1 have been clarified.

The phrase "lakes, rivers, wetlands, and groundwater" is clearer than the phrase "water bodies", and those words are commonly used in the Water Plan.

The order of notified Objectives 7.A.1 and 7.A.2 has been reversed to be more logical.

2.2 Schedule 15 and "good quality water"

Notified Schedule 15 set the water quality objectives for Otago, and the target dates by which those objectives were to be achieved. Reference to Schedule 15 was made in Policy 7.B.1.

We considered the submissions and evidence received and recommend that Policy 7.B.1 and Schedule 15 be amended in order to clarify the purpose of Schedule 15.

2.2.1 Recommendations

(a) Amend Policy 7.B.1, in order to clarify the purpose of Schedule 15:

~~7.B.1 Ensure water is of good quality by the target dates described in Schedule 15, to support natural and human use values, by:~~

~~(a) Avoiding discharges of contaminants with noticeable effects on natural and human use values; and~~
~~(b) Allowing discharges of contaminants that cumulatively have minor effects, or are short-term; and~~
~~(c) Minimising disturbance of the beds of rivers and lakes.~~

7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by:

(a) Recognising the differences in the effects and management of point and non-point source discharges; and
(b) Defining, in Schedule 15, characteristics and standards that describe good quality water; and
(c) Maintaining, from the dates specified in Schedule 15, good quality water; and
(d) Enhancing water quality where it does not meet Schedule 15 standards; and
(e) Recognising discharge effects on groundwater.

...

(b) Amend the title of Schedule 15, in order to clarify the purpose of this Schedule:

15 Schedule of characteristics and numerical standards for good quality water in Otago lakes and rivers

(c) Amend Table 15.1, in order to clarify the purpose of this Schedule:

Table 15.1 Characteristics indicative of good quality water

Characteristic	Description	Contaminant effect

Clarity	~~Water is clear: able to easily and clearly see the bed w~~When standing in knee-deep water, the bed is easily and clearly seen. ~~Naturally occurring scums and foams only.~~	Sediment reduces the clarity of water, and has an adverse effect on aquatic habitats.
Colour	Water ~~is~~ colour ~~free,~~ is not altered by contamination. ~~however, s~~Some rivers have natural colour such as ~~are naturally~~ tannin-stained ~~e.g. The Catlin, Taieri, Waitahuna and Tokomairiro Rivers~~.	A change in colour can be indicative of contamination by sediment or organic matter, linked to potentially high concentrations of DRP, NNN, ammoniacal nitrogen or *E coli*.
~~**Algae**~~	~~Healthy levels of algae:~~ ~~▪ Do not cover more than 30% of the bed.~~ ~~▪ Strands are less than 20 mm in length.~~ ~~▪ No slime on the surface of the water.~~	
Sediment	Riffles and runs free of obvious clay ~~mud~~ and silt deposits. Walking across a riffle or run should not produce an obvious plume. ~~However, s~~Some rivers are naturally high in sediment ~~e.g. the Dart and Shotover Rivers~~.	Sediment affects the colour of water, and has an adverse effect on aquatic habitats, and can result in high concentrations of phosphorus, and allow *E coli* to persist.
Smell	Water is odourless~~, however, water in some wetlands may have a naturally earthy smell~~.	Smell can be indicative of contamination, from a source high in ammoniacal nitrogen or *E coli* or the decay of excessive amounts of algae which limits people's opportunity to appreciate water.
Algae	Healthy levels of algae: ▪ Do not cover more than 30% of the bed. ▪ Strands are less than 20 mm in length. ▪ No slime on the surface of the water.	Excessive nitrogen and phosphorus contribute to algal growth which has an adverse effect on native fish habitat, amenity and recreation values, and angling opportunities.
Bank appearance	~~Healthy~~ Functioning riparian margins: ▪ Vegetation is healthy ~~not stripped bare~~. ▪ Banks are stable. ▪ No obvious livestock disturbance.	Healthy riparian margins mitigate sediment and nutrient discharges.

(d) Amend Table 15.2, in order to clarify the standards and provide more robust protection for Otago lakes and rivers:

Table 15.2 Receiving water numerical standards and catchment t~~T~~imeframes ~~for catchments to meet specified measures of good receiving water quality~~ for achieving good quality water

The standards for Groups 1, 2 and 3 are 5-year 80th percentile values when water flow is at or below median.

Table 15.2.1: Receiving Water Group 1

~~Receiving water Group 1~~	Nitrate-nitrite nitrogen [1]	Dissolved reactive phosphorus [1]	Ammoniacal nitrogen [2]	*Escherichia coli* [3]	Turbidity [4]
	0.444 mg/L	0.026 mg/L	0.1 mg/L	~~126~~ 260 cfu/100 ml	5 NTU
Catlins	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012	~~31 March 2012~~ 31 March 2025
Carey's Creek	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
~~Fleming~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~
Kaikorai	31 March 2012	31 March 2012	31 March 2012	~~31 March 2017~~ 31 March 2025	31 March 2012
Leith	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	~~31 March 2017~~ 31 March 2025	31 March 2012
Mokoreta (within Otago)	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2012	~~31 March 2017~~ 31 March 2025	31 March 2012
Owaka	~~31 March 2017~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	~~31 March 2017~~ 31 March 2025	~~31 March 2012~~ 31 March 2025
Pomahaka, downstream of Glenken	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	~~31 March 2017~~ 31 March 2025	~~31 March 2012~~ 31 March 2025
Tahakopa	31 March 2012	31 March 2012	31 March 2012	~~31 March 2017~~ 31 March 2025	~~31 March 2012~~ 31 March 2025
~~Tautuku~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~
Tokomairiro	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Tuapeka	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waitahuna	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Waitati	31 March 2012	31 March 2012	31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012
Waiwera	~~31 March 2017~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	~~31 March 2017~~ 31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012

Any ~~other~~ unlisted tributary on the true right bank of the **Clutha/Mata-Au**, south of Judge Creek	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Any unlisted tributary on the true left bank of the **Clutha Mata-Au**, south of the Tuapeka catchment	31 March 2012				
Any ~~other~~ unlisted catchment that discharges to the **coast**, south of Taieri Mouth ~~the Matau Branch of the Clutha River/Mata-Au~~	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012

Table 15.2.2: Receiving Water Group 2

~~Receiving water Group 2~~	**Nitrate-nitrite nitrogen [1]**	**Dissolved reactive phosphorus [1]**	**Ammoniacal nitrogen [2]**	***Escherichia coli* [3]**	**Turbidity [4]**
	0.075 mg/L	**~~0.006~~ 0.01 mg/L**	**0.1 mg/L**	**~~126~~ 260 cfu/100 ml**	**5 NTU**
~~Arrow~~					
Cardrona	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Clutha/Mata-Au and any ~~other~~ unlisted tributary (Luggate to mouth, including Lake~~s Dunstan and~~ Roxburgh, and excluding tributaries described in Area 1)	31 March 2025	31 March 2012~~, except Lake Dunstan which has until 31 March 2017 to comply with nitrate-nitrite nitrogen~~			31 March 2025
Fraser	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Kakanui	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Kawarau downstream of	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012

the Shotover confluence					
Lake Dunstan	31 March 2012				
Lindis	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Luggate	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Manuherikia	~~31 March 2017~~ 31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Mill Creek (tributary to Lake Hayes)	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012
Pomahaka, upstream of Glenken	31 March 2012				
Shag	~~31 March 2017~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Shotover	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Taieri	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2025	31 March 2012	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025
~~Tokomariro~~	~~31 March 2017~~	~~31 March 2017~~	~~31 March 2012~~	~~31 March 2017~~	~~31 March 2012~~
Trotters	~~31 March 2012~~ 31 March 2025	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waianakarua	~~31 March 2017~~ 31 March 2025	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waikouaiti	~~31 March 2017~~ 31 March 2012	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012
~~Waitahuna~~	~~31 March 2017~~	~~31 March 2017~~	~~31 March 2012~~	~~31 March 2012~~	~~31 March 2012~~
Waipori	~~31 March 2017~~ 31 March 2012	~~31 March 2017~~ 31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waitaki tributaries within Otago	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Any ~~other~~ unlisted catchment that discharges to the **coast**, north of Taieri Mouth ~~the Matau Branch of the Clutha River/Mata-Au~~	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012

Table 15.2.3: Receiving Water Group 3

~~Receiving water Group 1~~	Nitrate-nitrite nitrogen [1]	Dissolved reactive phosphorus [1]	Ammoniacal nitrogen [2]	*Escherichia coli* [3]	Turbidity [4]

	0.03 mg/L	0.005 mg/L	0.01 mg/L	10 cfu/100 ml	3 NTU
Clutha/Mata-Au ~~(~~above Luggate~~)~~	31 March 2012	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Kawe~~e~~arau upstream of the Shotover confluence					
~~Any t~~Tributaries to Lakes Hawea, Wakatipu, and Wanaka					
Dart	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Matukituki	31 March 2025	31 March 2012	31 March 2012	31 March 2025	Exempt

The standards for Groups 4 and 5 are 5-year 80th percentile values at all times.

Table 15.2.4: Receiving Water Group 4

~~Receiving water Group 3~~	Total nitrogen [1]	Total phosphorus [1]	Ammoniacal nitrogen [2]	*Escherichia coli* [3]	Turbidity [4]
	~~0.725~~ 0.55 mg/L	~~0.043~~ 0.033 mg/L	0.1 mg/L	126 cfu/100 ml	5 NTU
Lake Hayes	31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Johnson	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Onslow	31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	~~31 March 2012~~ 31 March 2025
Lake Tuakitoto	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025
Lake Waipori & Waihola	~~31 March 2012~~ 31 March 2025	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	~~31 March 2012~~ 31 March 2025

Table 15.2.5: Receiving Water Group 5

~~Receiving water Group 5~~	Total Nitrogen	Total Phosphorus	Ammoniacal nitrogen [2]	*Escherichia coli* [3]	Turbidity [4]
	0.1~~57~~ mg/L	~~0.009~~ 0.005 mg/L	0.01 mg/L	10 cfu/100 ml	3 NTU
Lake Hawea	31 March 2012				
Lake Wakatipu	31 March 2012	~~31 March 2012~~ 31 March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Wanaka	31 March 2012				

mg/l = milligrams per litre

cfu/100 ml = colony-forming units per 100 millilitres
NTU = nephelometric turbidity units

~~[1] Promotes periphyton growth~~
~~[2] Indicates effluent contamination~~
~~[3] Indicator of pathogens present~~
~~[4] Measure of clarity~~

(e) Add new Map 15.1, in order to visually describe Receiving Water Groups 1, 2 and 3:

Map 15.1 Receiving Water Groups

(refer to the Map in Appendix 1)

2.2.2 Reasons

- **Schedule 15 does not allow degradation of water quality**

The purpose of Schedule 15 has been further clarified in amended Policy 7.B.1. Where existing water quality is better than Schedule 15 it will be maintained at that standard.

Where catchments breach Schedule 15.2 standards, ORC will seek to achieve compliance with those standards by the target dates set in that Schedule.

Schedule 15 replaces the policies in section 7.6 of the operative Water Plan that specifically target catchments with degraded water quality.

- **Schedule 15 and good quality water**

Schedule 15 is composed of two tables. Table 15.1 sets narrative standards of good quality water, while Table 15.2 contains numerical standards and target dates for good quality water. The narrative standards in Table 15.1 of Schedule 15 are preliminary indicators of water quality. Meeting these narrative standards does not guarantee good quality water, therefore compliance with the numerical standards in Table 15.2 is also required. This has been clarified in the heading of Table 15.1.

The narrative characteristics in Table 15.1 have been clarified, and as well, their relationships with the key contaminants and their adverse effects targeted in Table 15.2 and their adverse effects. The added description of these characteristics and adverse effects better define what is meant by "good quality water".

These characteristics allow a good assessment of the water quality in lakes and rivers, without there being any need for additional criteria. The selected key indicators are highly correlated to other indicators, such as periphyton growth, dissolved oxygen, and chlorophyll-a. The Macroinvertebrate Community Index (MCI) is a better indicator of habitat rather than water quality.

Schedule 15 standards are based on recognised water quality guidelines such as ANZECC 2000, Periphyton Guidelines (Biggs, 2000), MfE Guidelines (2002), and

Trophic Lakes Guidelines (Burns, 2000). Standards for ammoniacal nitrogen reflect a low tolerance for effluent entering lakes, rivers, wetlands and groundwater. The standards for *E coli* in the large lakes and their tributaries protect the current very high water quality of the large lakes.

Schedule 15 standards were originally developed as median values. Median values allow for large variations in water quality. We recommend that Schedule 15 standards be set as 80th percentile values. In rivers, compliance with the standards will be sought at or below median flow. The new standards are more stringent than median values. Standards for *E coli* and DRP have been adjusted accordingly.

Schedule 15 standards, as notified, did not give an adequate degree of protection to the lakes. The standards for TN and TP for small lakes were placed at the border between high nutrient enrichment, eutrophic grade, and the very high nutrient, supertrophic grade. For the large pristine lakes the standards were at the border of low nutrient enrichment, oligotrophic grade, and the medium nutrient enrichment, mesotrophic grade. The new recommended standards equate to 50% of the eutrophic band scale for small lakes, and to 25% of the oligotrophic band scale for large lakes (from Burns, 2000).

- **Schedule 15 and water quality variability**

Target dates have been set for those catchments that currently breach the Schedule 15 standards. These have been set at 1 April 2025. This is appropriate, as compliance with the standards is assessed based on a 5-year data set. In all the other catchments, water quality is expected to be maintained as a result of the plan change. The standards and categories in Table 15.2 are based on accrual time for rivers and on trophic conditions for lakes.

The Waianakarua and Kakanui catchments have low flows in summer and gravel substrate, and therefore belong in Group 2. By contrast, the Tokomairiro, Tuapeka and Waitahuna catchments along with unnamed adjacent catchments belong in Group 1, because of their similarity with the catchments on the south west of the Clutha River. The catchments discharging to the Waitaki River have been included in Group 2, while the Matukituki River has been exempted from turbidity standards, for consistency with the Shotover. Finally, as a eutrophic lake, Lake Onslow belongs in the Receiving Water Group 3.

The Pomahaka catchment has been split into two to recognise the very good water quality of the upper catchment and its high angling values.

- **The practical implications of Schedule 15**

The reference to Schedule 15 in Policy 7.B.1 does not preclude the granting of consents in the catchments that breach Schedule 15 standards. Consent applications will be assessed against a large set of variables. The potential impact of discharges on the achievability of the standards in the receiving water body is only one of the variables that will be considered.

Schedule 15 standards are 80th percentile values based on 5-year data. A one-off sample will only give an indication of whether the receiving water meets Schedule 15 standards.

- **Clearer wording**

Headings in Schedule 15 have been reviewed and amended to clarify the scope and content of Schedule 15. The description of catchments has been amended and a map has been added to avoid any ambiguity about the areas covered by each receiving water group.

2.3 General policies that apply to all discharges

The notified plan change split the policies on water quality into 3 separate sections: 7.B for all discharges, 7.C for industrial and urban discharges, and 7.D for rural discharges.

We considered the submissions and we recommend that 7.B be amended to clarify ORC's approach to managing water quality, and to remove any internal inconsistencies between policies.

2.3.1 Recommendations

(a) Replace notified Policy 7.B.1 with three new policies, in order to provide greater support for the rule framework and better guidance for consent decisions:

~~**7.B.1 Ensure water is of good quality by the target dates described in Schedule 15, to support natural and human use values, by:**~~

~~**(a) Avoiding discharges of contaminants with noticeable effects on natural and human use values; and**~~

~~**(b) Allowing discharges of contaminants that cumulatively have minor effects, or are short-term; and**~~

~~**(c) Minimising disturbance of the beds of rivers and lakes.**~~

7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by:

(a) Recognising the differences in the effects and management of point and non-point source discharges; and

(b) Defining, in Schedule 15, characteristics and standards that describe good quality water; and

(c) Maintaining, from the dates specified in Schedule 15, good quality water; and

(d) Enhancing water quality where it does not meet Schedule 15 standards; and

(e) Recognising discharge effects on groundwater.

7.B.2 Avoid objectionable discharges of water or contaminants that degrade the natural and human use values of Otago lakes, rivers, wetlands and groundwater.

7.B.3 Allow discharges of water or contaminants to Otago lakes, rivers,

wetlands and groundwater that have minor effects or are short-term.

(b) Delete notified Policy 7.B.2, in order to avoid inconsistencies with notified Policy 7.B.3:

~~**7.B.2** *[Moved from 7.7.1]* **To promote discharges of contaminants to land in preference to water, where appropriate.**~~

(c) Amend and renumber notified Policy 7.B.3, in order to clarify the intent of this policy:

7.B.~~4~~3 *[Moved from 7.7.2]* **When considering ~~the~~ any discharge of water or ~~any~~ contaminant~~s~~ to land, ~~to~~ have regard to:**

(a) The ability of the land to assimilate the ~~discharge contaminant~~ water or contaminants; and
(b) Any potential ~~for~~ soil contamination; and
(c) ~~Any potential for land instability~~ Any potential land instability; and
(d) ~~Actual or~~ Any potential adverse effects on water quality ~~bodies.~~

(d) Amend notified Policy 7.B.5, in order to recognise the risk of introduction of new species resulting from inter-catchment transfers:

~~**7.B.5 Recognise the values of Iwi when water is discharged from one catchment to another.**~~

7.B.5 When considering any discharge of water from one catchment to water in another catchment, have regard to:

(a) Tangata whenua values; and
(b) The adverse effects of introducing species that are new to the receiving catchment.

(e) Amend Policy 7.7.8 and move this policy to become 7.B.6, in order to provide greater clarity:

7.B.6 *[Moved from 7.7.8]* ~~**To r**~~**Require, as appropriate, that any resource consent for discharging water or contaminants contains a review condition ~~provision be made for review of the conditions of any resource consent for discharging a contaminant~~.**

(f) Amend and renumber notified Policy 7.B.4, in order to clarify the intent of this Policy:

7.B.84 Encourage adaptive management and innovation that reduces the level of ~~discharge and impact of~~ contaminants in discharges ~~on water quality~~.

(g) Add a new Policy 7.B.7 that focuses on land management practices, in order to clarify the intent of Plan Change 6A:

7.B.7 Encourage land management practices that reduce the adverse effects of water or contaminants discharged into water.

2.3.2 Reasons

- **Giving effect to the objectives**

Notified Policy 7.B.1 described the overall approach adopted by ORC to achieve the Plan's objectives with regard to Otago lakes and rivers. In order to provide more clarity, this policy has been split into three separate policies. These better support the proposed rule framework and outline the criteria against which consent applications for discharges will be considered.

As amended, Policy 7.B.1 makes a clear distinction between point source and non-point source discharges and gives better recognition to the effects of discharges on wetlands and groundwater. Notified Policy 7.B.1(c) has been deleted, as the impacts of bed disturbance on water quality are sufficiently covered by the objectives and policies in Chapter 8 of the Water Plan.

New Policies 7.B.2 and 7.B.3 provide support for the permitted and prohibited rules in section 12.C of the plan change. See section 3.3 of this report.

New Policy 7.B.7 recognises that the adverse effects of discharges can also be reduced through changes in land management practices.

Amended Policy 7.B.8, notified as Policy 7.B.4, is aligned with Objective 7.A.3 by requiring landholders to adjust their operations to meet discharge standards, through "adaptive management and innovation". Industry best practices do not necessarily address the adverse effects of discharges on water quality.

- **Policies that address all discharges**

Managing water quality across the region requires an integrated approach that cuts across all economic sectors and applies to all sources of pollution. The policies in section 7.B provide a consistent and transparent policy framework that applies to rural as well as urban discharges. This section is complemented by sections 7.C and 7.D, which set specific policies for industrial and rural discharges.

The notified plan change focused on rural diffuse discharges. Most of the policies in section 7.B already apply to industrial and urban discharges under the operative plan including recommended Policy 7.B.6, which has been moved from section 7.C because it is relevant to all discharges.

Policies in section 7.B will be used when considering consent applications for rural, industrial or urban discharges. New Policy 7.B.2 promotes the avoidance of objectionable discharges that result in the degradation of the natural and human use values. The effects of industrial discharges that are not objectionable can still be remedied or mitigated under the Water Plan. See Policy 7.7.3 in section 7.C of the Water Plan.

Notified Policy 7.B.4 and new Policy 7.B.8 promote the principle that landholders are responsible for monitoring the effects of their activities on water quality. This principle is also expressed through the permitted activity rule framework in section 12.C.

- **Protection of freshwater values, and consistency with the RMA and NPSFW**

The amended policy framework protects the natural and human use values of the region's rivers, lakes, wetlands and groundwater. They provide for freshwater's economic values, and allow discharges that have minor effects on natural and human use values.

The recognition of "tangata whenua" values instead of "Iwi" values is consistent with the NPSFW and the RMA. The risk of introducing new species by discharging water from one catchment to water in another catchment is recognised.

- **Promoting discharges to land**

Policy 7.B.2, as notified, promoted discharges of contaminants to land in preference to water under any circumstances. This is inconsistent with Policy 7.B.3 which recognises the risks of soil contamination resulting from discharges to land. Therefore it is recommended to delete notified Policy 7.B.2.

In Policy 7.B.4, the condition on the risk of land instability has been reinstated, as it gives effect to Objective 5.3.8 of the Water Plan. However, the word "actual" is deleted, because discharges of contaminants to land have only potential effects on water, and the regard to actual effect was not necessary for the achievement of the plan's objective. There is no need for specifying within this policy what the potential effects of discharges to land on water bodies may be.

- **Clearer wording**

The terminology in Policy 7.B.1 has been reviewed to offer a clearer framework to the rules. The term "noticeable effects" has been used, while the term "good quality water" has been adopted for consistency with Schedule 15.

Terms such as "minor effects" and "short-term" are commonly used in the Water Plan and Policy 7.D.7 defines what is meant by "short-term" for rural discharges. See section 2.4.2 of this report.

2.4 Policies for other discharges, typically of a rural nature

The notified policies in section 7.D described how discharges, typically of a rural nature, are to be managed.

We considered the submissions and recommend a redraft of these policies. This will provide better guidance for consenting, and will improve certainty in implementing the rules.

2.4.1 Recommendations

(a) Amend the heading of section 7.D, in order to clarify the scope of this section:

> **7.D Policies for discharges of water and contaminants, excluding those discharges provided for in 7.C ~~nitrogen, phosphorus, *Escherichia coli* and sediment (excluding in human sewage, hazardous wastes and stormwater, and from industrial and trade premises)~~**

(b) Add new Policy 7.D.1, in order to promote innovation and information sharing:

> **7.D.1 Encourage innovation in management practices and the sharing of information, including by:**
>
> **(a) Council:**
> **(i) Providing information on water quality and water quantity; and**
> **(ii) Supporting landholders in measuring or assessing contaminants in discharges; and**
> **(iii) Supporting the development of means to measure or assess contaminants in discharges.**
>
> **(b) Landholders:**
> **(i) Implementing practices that reduce the level of contaminants in discharges; and**
> **(ii) Providing relevant information to support the catchment or aquifer studies undertaken by Council.**

(c) Delete notified Policy 7.D.1 and add new Policy 7.D.2, in order to provide more certainty and clarity:

> **~~7.D.1 Apply limits on contaminants in discharges where they are about to enter water.~~**
>
> **7.D.2 Schedule 16 discharge contaminant concentration limits apply, from 1 April 2020, at or below the reference flows set in Schedule 16B based on median flows.**

(d) Add new Policy 7.D.3, in order to support the use of prohibitions:

> **7.D.3 Prohibit objectionable discharges of water or contaminants that degrade the natural and human use values of Otago lakes, rivers, wetlands and groundwater.**

(e) Replace notified Policies 7.D.2 and 7.D.3 with new Policy 7.D.4, in order to clarify consent options:

> ~~**7.D.2 Provide for the consenting of discharges, that first occurred prior to 31 March 2012, for a limited time period beyond the timeframe specified in Schedule 16, where:**~~
>
> ~~**(a) Changes to land management practices or infrastructure to minimise the discharge have been implemented; and**~~
> ~~**(b) Additional changes to management practices or infrastructure are needed to achieve the limits; and**~~
> ~~**(c) An expeditious path to compliance with Schedule 16 is identified.**~~
>
> ~~**7.D.3 Provide for the consenting of discharges that exceed Schedule 16 limits as part of the development of technology or innovative practices associated with improving water quality.**~~
>
> **7.D.4 Provide for the consenting of any discharge under section 12.C:**
>
> **(a) Where changes to land management practices or infrastructure have not been sufficient to meet permitted activity rules; or**
> **(b) As part of the development of technology or innovative practices associated with improving water quality; or**
> **(c) From a short-term activity with short-term adverse effects.**

(f) Add new Policy 7.D.5, in order to provide better policy guidance for consent decisions:

> **7.D.5 When considering any discharge under section 12.C, have regard to:**
>
> **(a) The effects of the discharge on water quality, including cumulative effects; and**
> **(b) A staged timeframe and management plan to achieve compliance with the permitted activity rules; and**
> **(c) The extent to which the contaminants in the discharge result from the activities of the applicant; and**
> **(d) The likelihood that the staged timeframe and management plan can be successfully applied; and**
> **(e) The current state of technical knowledge.**

(g) Add new Policies 7.D.6 and 7.D.7, in order to provide better policy guidance for consent duration:

> **7.D.6 When considering the duration of a resource consent under section 12.C, have regard to:**
>
> **(a) The staged timeframe to achieve compliance with the permitted activity rules;**
> **(b) The extent to which the contaminants in the discharge result from the activities of the applicant;**
> **(c) Trends in the quality of the receiving water relative to the Schedule 15 standards;**
> **(d) Any adverse effects of the discharge on the maintenance of natural and human use values;**
> **(e) The extent to which the risk of potentially significant, adverse effects arising from the activity may be adequately managed through review conditions;**
> **(f) The value of the investment in infrastructure; and**
> **(g) The use of industry best practice.**
>
> **7.D.7 The duration of a resource consent for a discharge, which breaches any relevant Schedule 16 or nitrogen leaching limit, will not exceed:**
> **(1) Two years for discharges from a short-term activity with short-term adverse effects; or**
> **(2) Five years for all other discharges where the contaminants in the discharge result from the activities of the applicant.**

2.4.2 Reasons

- **Scope of section 7.D**

Notified section 7.D set the policies that specifically provide for "rural" discharges. The heading, as amended, recognises that "rural" discharges are not restricted to discharges of nitrogen, phosphorus, *E coli*, and sediment. It also ensures that the scopes of sections 7.D and 12.C of the plan change are aligned.

- **Sharing of responsibilities**

Section 7.D now includes a new Policy 7.D.1 that sets out the shared responsibilities of ORC and individuals in monitoring trends in the quality of the region's surface and groundwater resources.

- **The assimilative capacity of water**

In the notified plan change, Policy 7.D.1 was intended to provide clarity around the matter of reasonable mixing and the use of assimilative capacity of water in relation to rural diffuse discharges. The new Policy 7.D.2 now clarifies how the assimilative capacity of water is used in relation to discharges of contaminants listed in Schedule

16. Contaminant limits must be met when the receiving water is at or below median flow.

- **Practicality of issues**

Notified Policy 7.D.1 provided clarity around the point where compliance with the discharge limits was required. It is appropriate to delete notified Policy 7.D.1 as the amended rules in 12.C now adequately address issues around the application of discharge limits at a particular point.

- **A policy framework that supports the prohibitions**

New policy 7.D.3 provides support for the use of prohibitions in section 12.C.0, and describes which discharges should not occur under any circumstances.

The term objectionable refers to discharges that are significant in terms of their effects on the receiving environment or where no attempt has been made to mitigate these effects.

- **Discharges not attributable to activities of the discharger**

Plan Change 6A is based on the principle that landholders should take responsibility for the effects and costs of their discharge activities, not the wider community. However, it is unreasonable for them to be held accountable for discharges that they have no control over, or that do not arise from their activities.

The policy framework in Section 7.D has been amended to give better recognition to this principle and allow consent decision-makers to give due consideration to this matter.

- **Consent Guidance**

New Policies 7.D.5, 7.D.6 and 7.D.7 provide consent decision making guidance for discharges to water or to land in circumstances that may result in contaminant entering water.

Landholders are required to do the best they can to meet the permitted activity conditions. The consent duration is limited to five years, to ensure that every effort will be made to manage activities so that they have no more than minor effects on water quality. New Policy 7.D.7 defines "short term".

Notified Policy 7.D.2 did not provide consenting guidance for all the activities that were discretionary or restricted discretionary. New policies 7.D.5 and 7.D.6 cover all discharges for which a consent application can be made. The list of matters for consideration is extended to provide for a more balanced assessment of specific situations.

2.5 Policies for urban and industrial discharges

Notified provisions for industrial and urban discharges remained largely unchanged from the operative Water Plan, apart from the deletion of Policy 7.7.5.

We recommend that the scope of policies be clarified to cover discharges from large dams, including hydro-electricity dams.

2.5.1 Recommendations

(a) Amend the heading of section 7.C, in order to clarify the scope of this section:

7.C Policies for discharges of human sewage, hazardous substances, hazardous wastes, specified contaminant, and stormwater; ~~and other specified contaminants,~~ and discharges from industrial or ~~and~~ trade premises and consented dams

2.5.2 Reasons

- **Scope of section 7.C**

The notified plan change did not explicitly provide for discharges from large dams. The amendment of section 7.C's heading removes any uncertainty over what policies apply to those discharges. The rules applying to those discharges are discussed in section 3.11 of this report.

CHAPTER 3 – WATER AND CONTAMINANT DISCHARGES

The notified discharge rules sought to improve on those in the existing Water Plan by using an effects-based rather than an activity-based approach. Effects that would always be considered intolerable were proposed to be prohibited, while discharges with no more than minor adverse effect would be permitted.

Submitters identified a number of issues with the notified rules, and we have taken their concerns on board in proposing a redraft of the discharge rules in this chapter.

3.1 A revised structure for the rules

The notified plan change amended the structure of discharge rules.

Provisions in sections 12.A and 12.B for discharges including discharges of human sewage, hazardous substances, and discharges from industrial or trade premises, were retained largely unchanged. Section 12.C sets general discharge rules that focus on the effects of discharges on water quality.

The notified introductory note box for sections 12.A to 12.C explained how the discharge rule framework worked. The note box had no regulatory effect.

We considered the submissions presented, and recommend making changes that improve clarity and consistency.

3.1.1 Recommendations

(a) Turn the note boxes under section "12A – 12.C Introduction..." and section 12.C into Rules 12.A.A.1, 12.B.A.1, 12.C.A.1 and 13.5.A.1, in order to give legal effect to these note boxes:

~~**12.A – 12.C Introduction to discharges of contaminants or water**~~

~~**How the rule framework applies:**~~

~~Section 12.A applies to any discharge that contains human sewage.~~

~~Section 12.B applies to any discharge that contains a hazardous substance, hazardous waste or other contaminant specified in the rules, including:~~

- ~~Herbicides, pesticides, fertiliser.~~
- ~~Tracer dye.~~
- ~~Sullage, cooling water, water supplies, pools, water used for holding live organisms.~~
- ~~Stormwater (runoff from impervious surfaces).~~
- ~~Discharges from industrial and trade premises.~~

~~If a discharge contains both human sewage and a hazardous substance, waste or specified contaminant, then rules in both 12.A and 12.B must be met.~~

~~Section 12.C applies to any other discharge not specifically provided for in~~

~~Sections 12.A or 12.B.~~

12.6A Discharge of human sewage

12.A.A General Rules for section 12.A

12.A.A.1 The discharge rules in section 12.A apply where a discharge contains human sewage.

12.A.A.2 The discharge rules in sections 12.A and 12.B apply where a discharge:

(a) Contains both human sewage and a contaminant provided for in section 12.B; or

(b) Contains human sewage and is from an industrial or trade premises, or a consented dam.

12.7B Discharge of ~~pesticides~~ hazardous substances, hazardous wastes, ~~other~~ specified contaminants, and stormwater; and discharges from industrial ~~and~~ or trade premises and consented dams

12.B.A General Rules for section 12.B

12.B.A.1 The discharge rules in section 12.B apply where a discharge:

(a) Contains a contaminant provided for in section 12.B; or

(b) Is from an industrial or trade premises or consented dam.

12.B.A.2 The discharge rules in sections 12.A and 12.B apply where a discharge:

(a) Contains both human sewage and a contaminant provided for in section 12.B; or

(b) Contains human sewage and is from an industrial or trade premises, or a consented dam.

12.C Other discharges

~~Note: 1. Section 12.C applies to any discharge not specifically provided for in~~

~~Sections 12.A or 12.B.~~

~~2. Under the Regional Plan: Water, reclamation and deposition of cleanfill associated with works in the bed of a lake or river, or wetland, are addressed through disturbance rules in Section 13.5, and not through discharge rules in Section 12.C.~~

12.C.A General Rules for section 12.C

12.C.A.1 Discharge rules in section 12.C apply to any discharge not provided for in sections 12.A, 12.B or 13.5.

13.5 Alteration of the bed of a lake or river, *or of a Regionally Significant Wetland*

13.5.A General rules for Section 13.5

13.5.A.1 Discharges of bed material resulting from the alteration of the bed of a lake or river, or a Regionally Significant Wetland, are addressed only through rules in section 13.5.

Note: Alteration includes any disturbance, and the associated remobilisation (discharge) and redeposition (deposit) of bed material ~~sediments~~ already present, reclamation or deposition of cleanfill associated with works in the bed. ~~Under the Regional Plan: Water, reclamation and deposition of cleanfill associated with works in the bed of a lake or river, or wetland, are addressed through disturbance rules in Section 13.5, and not through discharge rules in Section 12.C~~.

(b) Amend the heading to 12.B in order to explicitly include discharges from consented dams in this section:

12.~~7~~B Discharge of ~~pesticides~~ hazardous substances, hazardous wastes, ~~other~~ specified contaminants, and stormwater; and discharges from industrial ~~and~~ or trade premises and consented dams

(c) Add new rule 12.C.A.2 in order to clarify the priority between the rules in section 12.C:

12.C.A.2 Within section 12.C, prohibited activity rules prevail over any permitted, controlled, restricted discretionary and discretionary

activity rules.

3.1.2 Reasons

- **How the sections work together**

Turning the note box under the header for "12A – 12.C Introduction..." into general rules gives legal weight to the content of the note box and ensures that the framework is applied consistently.

Discharge rules have also been placed in the relevant section and made consistent with the header of each section. This reduces uncertainty over the scope of each section.

- **Remobilisation**

Section 4.2.2 of this report describes the changes to the section 13.5 note box.

- **Priority between rules**

To avoid confusion over which rule prevails the activity status of a particular activity should be made clear with new Rule 12.C.A.2.

- **Consented dams**

Section 3.11.2 of this report describes the inclusion of discharges into section 12.B.

3.2 Rules in section 12.C

The rules in section 12.C focus on the effects of those discharges not covered in sections 12.A or 12.B. They address "rural discharges", and translate the effects based approach into a regulatory framework. Appendix 2 provides flowcharts of how the rules apply.

We recommend a variety of changes to rule numbering and content in this chapter. The table below identifies the contaminant or matter of interest, the adverse effects of that matter, the revised rules that we recommend addressing the matter, and which sections of this report discuss the matter.

Matter	Description of adverse effects	New rule	Section of this report
Oil, grease film, scum or foam and objectionable odour in water	These effects are seen as gross and prevent people from enjoying water	12.C.0.1 (prohibited)	3.3
		12.C.1.1 (permitted)	3.3
		12.C.2 (restricted discretionary)	3.10
Floatable or suspended material other than	These effects are seen as gross and prevent people from enjoying water	12.C.1.1 (permitted)	3.3

Matter	Description of adverse effects	New rule	Section of this report
sediment		12.C.1.2 (permitted)	3.7
		12.C.2.1 (restricted discretionary)	3.10
Sediment and visual change in receiving water's clarity	Sediment has an adverse effects on aquatic habitats	12.C.0.3 (prohibited)	3.3
		12.C.1.1 (permitted)	3.5
		12.C.1.2 (permitted)	3.7
		12.C.2.1 12.C.2.2 (restricted discretionary)	3.10
Nutrients: NNN, DRP, ammoniacal nitrogen, and bacteria: *E coli*	- Phosphorus and nitrogen can contribute to algal growth. This has an adverse effect on fish habitat, amenity and recreation values - Ammoniacal nitrogen is toxic to aquatic life - E coli is a measure that indicates toxicity, and therefore adversely affects contact recreation - Animal waste systems, silage storage and composting are important sources of those contaminants	12.C.0.2 (prohibited)	3.3
		12.C.1.1 (permitted) Schedule 16	3.6
		12.C.1.3 (permitted)	3.9
		12.C.2.1 12.C.2.2 (restricted discretionary)	3.10
		12.C.2.3 (restricted discretionary)	3.10
Flooding, erosion, land instability or property damage	- Can cause or exacerbate hazards, adversely affecting people and their environment	12.C.1.1 (permitted)	3.3
		12.C.1.2 (permitted)	3.3
		12.C.3.1 (discretionary)	3.10
Discharges of water to water in another catchment	- Species may be introduced to areas where they are not already present - Water quality in the receiving catchment may be reduced - The mauri of the water may be adversely affected	12.C.1.1 (permitted)	3.8
		12.C.1.2 (permitted)	3.8
		12.C.3.1 (discretionary)	3.10
Changes to the water level range or hydrological function of a regionally significant wetland	- This can adversely affect the hydrological and habitat values.	12.C.1.1 (permitted)	3.8
		12.C.1.2 (permitted)	3.8
		12.C.3.1 (discretionary)	3.10

3.3 Prohibiting objectionable activities (section 12.C.0)

Notified section 12.C.0 prohibited discharges that were considered so objectionable that a resource consent would never have been granted.

We considered the submissions presented. We recommend changes that improve clarity and practicality, but ensure that inappropriate discharges continue to be prohibited.

3.3.1 Recommendations

(a) Delete notified Rule 12.C.0.1 and replace it with a permitted activity condition, in order to avoid prohibiting discharges with minor effects:

~~12.C.0.1 Any discharge of contaminants, where the discharge is about to enter water, that:~~
~~(i) Has an odour; or~~
~~(ii) Contains an oil or grease film, scum or foam, or floatable material,~~
~~is a ***prohibited*** activity.~~

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

...

(d) Where the discharge first enters water in any lake, river, wetland or any open drain or water race that flows to a lake, river or wetland, the discharge:

...

(3) Does not have an odour, oil or grease, film, scum or foam; and

(4) Does not have floatable or suspended materials, other than inorganic sediment; and

...

(b) Amend notified Rule 12.C.0.2 in order to increase clarity and avoid prohibiting discharges with minor effects:

12.C.0.~~2~~1 ~~Any~~ The discharge of any contaminant~~s~~ to water, that ~~results in water~~ produces~~:~~
~~(i) Increasing in colour; or~~
~~(ii) Reducing in visual clarity; or~~
~~(iii)~~an objectionable ~~Developing an~~ odour~~:~~, or
~~(iv) Developing an~~ a conspicuous oil or grease film, scum or foam, in any:
(i) Lake, river or Regionally Significant Wetland; or
(ii) Drain or water race that flows to a lake, river or Regionally Significant Wetland; or
(iii) Bore or sump,
is a ***prohibited*** activity.

(c) Delete notified Rule 12.C.0.3 and replace it with a permitted activity condition, in order to avoid prohibiting discharges with minor effects:

~~12.C.0.3 Any discharge of water or contaminants to water, that results in flooding, erosion, land instability or property damage, is a ***prohibited*** activity.~~

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

(a) The discharge does not result in flooding, erosion, land instability, or property damage; and

...

12.C.1.~~6~~.2 Notwithstanding Rule~~s~~ 12.C.1.1~~, 12.C.1.2 and 12.C.1.5~~, the discharge of water or any contaminant~~s listed in Schedule 16~~ from:

(i) A water race that does not convey irrigation runoff; or

(ii) A dam:

(1) P~~p~~ermitted under Rule 13.2.1.3 ~~12.3.2.1~~; and ~~or~~

(2) Not for the purpose of the storage of contaminants,

~~(ii) water supply transport system,~~

to any lake, river, wetland or any water race that flows to a lake, river or wetland ~~water, or to a Regionally Significant Wetland~~, is a ***permitted*** activity, providing:

...

(d) The discharge does not:

(1) Result in flooding, erosion, land instability or property damage; and ...

(d) Amend notified Rule 12.C.0.4 in order to increase clarity, and to avoid prohibiting unpreventable sediment mobilisation:

12.C.0.~~4~~3 Any discharge of sediment from disturbed land to water in any:

(i) Lake, river or Regionally Significant Wetland; or

(ii) Drain or water race that flows to a lake, river or Regionally Significant Wetland,

where no measure ~~has been~~ is taken to ~~avoid~~ mitigate sediment runoff, is a ***prohibited*** activity.

(e) Amend notified Rule 12.C.0.5 and delete notified Rule 12.C.1.4 in order to increase clarity and prohibit high risk activities:

12.C.0.~~5~~2 ~~Any~~ The discharge of any contaminant~~s~~ from an animal waste system, silage

storage or a composting process:
(i) To any lake, river or Regionally Significant Wetland ~~a water body~~, or
(ii) To any drain or water race that connects to a lake, river or Regionally Significant Wetland; or
(iii) To the bed of any lake, river or Regionally Significant Wetland; or
~~(ii) To saturated land; or~~
(~~iii~~iv) To any bore or sump, ~~a conduit to water, or the bed of any lake or river, or Regionally Significant Wetland;~~ or
(~~iv~~) ~~That enters water from land~~ To land within 50 metres of:~~; or~~
(a) Any lake, river or Regionally Significant Wetland; or
(b) Any bore or sump; or
(vi) To saturated land; or
(vii) That results in ponding;
is a ***prohibited*** activity.

~~12.C.1.4 The discharge of contaminants from any animal waste system to land, is a *permitted* activity, providing:~~
~~(a) The discharge occurs more than 50 metres from any bore used to supply water for domestic needs or drinking water for livestock; and~~
~~(b) There is no discharge onto any other person's property without the other person's agreement.~~

3.3.2 Reasons

- **Use of the prohibited activity**

The prohibitions give effect to new Policies 7.B.2 and 7.D.3, and amended Objectives 7.A.1 and 7.A.2. They apply to discharges which are so objectionable that they would never be granted resource consents.

The prohibited activity rules as notified could have prohibited some discharges with no more than minor effects. As a result, the matters notified in 12.C.0.1 and 12.C.0.3 are incorporated as conditions to the permitted activity rules. Discharges that are not permitted but may not be objectionable now have a consent option available. See section 3.10 of this report. The qualifiers "objectionable" and "conspicuous" from Section 107 RMA have been added to new Rule 12.C.0.1.

Amended rules 12.C.0.2 and 12.C.0.3 target practices that have a high risk of adverse effects on water quality, and that would never be granted a consent. The prohibited activity status is therefore appropriate for those discharges.

- **Avoiding conflicts between rules**

Deleting notified Rule 12.C.0.1 removes any confusion with notified Rule 12.C.0.2.

Deleting notified rule 12.C.0.2(i) increasing in colour, and (ii) reducing in visual clarity also removes the inconsistency with new rules 12.C.0.3 and 12.C.1.1, both of which allow sediment to discharge to water.

New rule 12.C.A.2 clarifies that a prohibited activity rule prevails over any permitted, restricted discretionary or discretionary activity rule.

- **Scope of the prohibitions**

The objective of the plan change is to maintain or enhance water quality in Otago lakes, rivers, wetlands and groundwater. Therefore, it is appropriate to restrict the scope of the prohibited activity rules to discharges of contaminants that are likely to enter one of those water bodies, including Regionally Significant Wetlands.

The provisions in section 12.B address urban stormwater discharges and discharges from impervious road surfaces, that may or may not be through reticulated systems. The prohibited activity rules do not apply to these discharges. However, they apply to irrigators, forestry companies or operators of permitted dams. Under the effects based approach, it is not appropriate to discriminate between different land uses.

- **Exceptional circumstances and emergencies**

Finally, the RMA provisions in Sections 18, 330, 330A, 330B, 341, 341A, 341B provide protection for people who breach the prohibited rules in emergency situations.

- **Discharges of sediment**

Notified Rule 12.C.0.4 prohibited the discharge of sediment to water if no measure had been taken to prevent that discharge. It is recommended that amended Rule 12.C.0.3 replaces "avoid" with "mitigate" and "if" with "where".

It is at the discretion of those undertaking activities which disturb land to choose a measure that mitigates sediment discharge to water. Any measure will need to ensure sediment discharges do not breach the permitted activity Rule 12.C.1.1, unless a consent has been obtained.

Chapter 13 of the Water Plan covers rules for land use on lake or river beds or Regionally Significant Wetlands. Any sediment release resulting from the disturbance of the bed of a lake or river or of a Regionally Significant Wetland is covered by these rules and is not subject to this prohibited activity rule. This is clarified by new Rule 13.5.A.1. See sections 3.1 and 4.2 of this report.

- **Discharges from animal waste systems, silage storage, or composting processes**

In the notified plan change, discharges from animal waste systems, silage storage or composting processes were addressed in two rules: 12.C.0.5 and 12.C.1.4. It is recommended to incorporate these two rules into amended Rule 12.C.0.2. Condition

(b) of notified Rule 12.C.1.4 is deleted as it is a civil matter that is not required to be addressed in the Water Plan.

Other amendments to Rule 12.C.0.2 are made to increase clarity as to when these types of discharges will be prohibited. The word "conduit" is better defined.

Definitions of the terms "saturated land" and "ponding" are not included because it is sufficient to interpret words by their common meaning. Prohibited discharges have a high risk of adverse effects on lakes, rivers, Regionally Significant Wetlands and groundwater. Land management practices can prevent these discharges.

Discharges from offal pits and farm waste dumps to water are not covered in new Rule 12.C.0.2, but are addressed in Rules 12.C.0.1 and 12.C.1.1 (see notified consequential change to section 11.3.3.3). They are also covered in the Regional Plan: Waste for Otago.

- **Timeframes for prohibitions to take effect**

Section 87B(1)(c) of the RMA treats prohibited rules as discretionary until they become operative. The current operative Water Plan rules already strictly control various gross discharges, as conditions of permitted activities, and no consent has been granted for these activities in the past.

3.4 The permitted activity rule framework (section 12.C.1)

Section 12.C.1 of the notified plan change sought to permit any discharge to water that had no more than minor adverse effect on water quality. This was done in six permitted rules, which addressed various discharges.

We considered the submissions presented, and recommend the following:

- The permitted activity rule framework be made easier to follow by clarifying how the rules work together; and using the wording of the RMA; and
- The scope of the permitted rules be changed, to cover all the undesirable effects of discharges.

3.4.1 Recommendations

(a) Delete notified Rules 12.C.1.1, 12.C.1.2 and 12.C.1.5, and incorporate their content into new Rule 12.C.1.1 in order to clarify the meaning of the permitted rules and set a comprehensive general permitted discharge rule:

~~12.C.1.1 The discharge of sediment to water is a *permitted* activity, providing:~~

...

~~12.C.1.2 The discharge of a contaminant listed in Schedule 16 to:~~
~~(i) Water; or~~
~~(ii) Land in a manner that may enter water.~~

...

~~12.C.1.5 The discharge of water to water, or water to a Regionally Significant Wetland, that:~~

...

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

...

(b) Add new Rule 12.C.1.1, and amend notified Rules 12.C.1.3 and 12.C.1.6 in order to clarify the meaning of the permitted rules and the interaction between them:

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

...

(e) Any discharge of nitrogen also complies with Rule 12.C.1.3.

12.C.1.~~6~~.2 Notwithstanding Rule~~s~~ 12.C.1.1~~, 12.C.1.2 and 12.C.1.5~~, the discharge of water or any contaminant~~s listed in Schedule 16~~ from:

(i) A water race that does not convey irrigation runoff; or

(ii) A dam:

(1) P~~p~~ermitted under Rule 13.2.1.3 ~~12.3.2.1~~; and ~~or~~

(2) Not for the purpose of the storage of contaminants,

~~(ii) water supply transport system,~~

to any lake, river, wetland or any water race that flows to a lake, river or wetland ~~water, or to a Regionally Significant Wetland~~, is a ***permitted*** activity, providing:

...

12.C.1.3 The discharge of nitrogen[1] ~~from~~ onto or into land in circumstances which may result in nitrogen entering ~~to~~ groundwater, is a ***permitted*** activity, providing:

...

3.4.2 Reasons

- **Creating a comprehensive general permitted discharge rule**

New Rule 12.C.1.1 is a catch-all rule for discharges that are not covered by sections 12.A or 12.B, and highlights that the conditions of this permitted activity work together. This makes the rule framework easier to apply.

- **Using RMA wording**

Section 15(1) RMA precludes any person from discharging water or contaminants to water, or contaminants onto or into land in circumstances which may result in those contaminants entering water, unless expressly allowed by a rule in a regional plan, a resource consent, or regulations.

Using the wording of the RMA in the rules provides more certainty, as these words have been interpreted in case-law.

- **Clarifying interactions between the permitted activity rules**

The relationship between amended Rule 12.C.1.1, and Rule 12.C.1.3, which deals with nitrogen leaching to groundwater, is clarified through the addition of a condition to 12.C.1.1.

Amended Rule 12.C.1.2 provides an exception to amended Rule 12.C.1.1 and allows the discharge of contaminants already in water through a permitted activity dam or a water race. See section 3.7.2 for further discussion on this issue.

- **Discharges of water and discharges of contaminant**

Contaminant includes any substance, energy or heat that when discharged into water, changes the physical, chemical or biological condition of the water (Section 2 RMA).

In the plan change as notified, discharges of water and of contaminants were addressed in separate rules. However, water and contaminants are usually bound together: discharges of water can contain contaminants, and contaminants are often carried by water.

The merging of Rules 12.C.1.1, 12.C.1.2 and 12.C.1.5 into new rule 12.C.1.1 avoids confusion between discharges of contaminants and discharges of water.

3.5 Permitted sediment discharges

In addition to the notified prohibited activity Rules 12.C.0.2 and 12.C.0.4 (see section 3.3 of this report), the notified plan change permitted the discharge of sediment, providing a number of conditions were met.

We considered the submissions presented on the rules permitting sediment discharges. We recommend changes to make the permitted rule on sediment more workable and better aligned with the prohibited rules.

3.5.1 Recommendations

(a) Delete notified Rule 12.C.1.1 and add its conditions into new Rule 12.C.1.1 in order to provide for the discharge of sediment as part of the general permitted activity rule:

~~12.C.1.1 The discharge of sediment to water is a ***permitted*** activity, providing:~~

~~(i) After the cessation of rainfall on the site, the discharge does not cause sedimentation.~~

~~(ii) From 31 March 2017:~~

~~(a) More than one hour after rain ceases on the site the discharge shall not exceed water clarity of 40 nephelometric turbidity units, where the discharge is about to enter water.~~

~~(b) More than twelve hours after rains ceases on the site the discharge shall not exceed water clarity of 5 nephelometric turbidity units, where the discharge is about to enter water.~~

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

...

(d) Where the discharge first enters water in any lake, river, wetland, or any open drain or water race that flows to a lake, river or wetland, the discharge:

...

(2) Does not contain sediment that results in:

a. A visual change in colour or clarity; or

b. Noticeable local sedimentation,

in the receiving water; and

...

3.5.2 Reasons

- **Conflict between rules**

The conditions on colour or clarity in notified prohibited Rule 12.C.0.2 have been incorporated into the new permitted activity rule. This avoids conflict between these two rules. This also recognises that discharges of sediment with less than minor effect need to be provided for as a permitted activity.

- **Sediment limit relative to receiving water**

It is appropriate to measure the effect of sediment in the receiving water, rather than in the discharge before it enters water, as was the case in the notified rule. This allows the background quality of the receiving water to be considered.

People undertaking activities that result in a discharge of sediment to water are responsible for the effect their discharge has on receiving water. If there is a visual change in the receiving water, then the discharge is not permitted. If receiving water is already turbid and the discharge does not result in a visual change, then the discharge is permitted.

The test of changes in visual clarity permits some sedimentation to occur. Research has demonstrated that, under optimum conditions, "the median threshold for the detection of change in visual clarity is about 10-15%", and that "almost all people can detect a change of about 30%". *(MfE Water Quality Guidelines N°2: Colour and Clarity, 1994)*

Assessing sediment when the discharge enters water is easier than measuring the discharge before it enters water. This will make the rule simpler to apply for those undertaking activities, and for those enforcing the rules.

- **Narrative standard**

Changing numerical limits to narrative limits makes it easier for people undertaking activities to determine if they are meeting the permitted activity conditions. They can assess the change in clarity or colour by eye-sight, rather than assessing the water clarity in nephelometric turbidity units.

- **Protecting the water quality**

The plan change seeks to protect water quality in all Otago lakes, rivers, wetlands and groundwater. The permitted activity sediment control applies to discharges to lakes, rivers, wetlands, or to open drains or races that flow into one of those water bodies.

- **Reasonable mixing**

Reasonable mixing is not explicitly allowed for in this rule. The concerns behind requests for reasonable mixing are addressed through permission of some sedimentation to occur.

- **When should the standard apply?**

Deletion of the rainfall condition increases certainty about when the rule applies. The term "rain" is uncertain and can refer to anything from mist to storms. The standard on sediment discharges now applies during rain events. However, because lakes and rivers can be turbid after significant rain events, sediment discharges relative to the receiving water can be less stringently controlled during rain events.

It is not appropriate to apply the sediment standard only when rivers are below median flow, as is the case for other contaminants. See section 3.6 of this report. Sediment is unlike other contaminants that are flushed out at high flows. The effects of discharges of sediment are felt throughout the year.

- **Timeframe**

Existing Water Plan rules already strictly control sediment discharge, so application of these clearer rules must apply immediately. The notified rule which prohibited discharges resulting in water changing in visual clarity or reducing in colour would have had immediate effect.

- **Prohibiting and consenting sediment discharges**

See sections 3.3 and 3.10 of this report for discussion on sediment discharges which are prohibited or require consent.

3.6 Schedule 16 contaminants

The notified plan change permitted the discharge of nitrogen, phosphorus, ammoniacal nitrogen and *E coli* under Rule 12.C.1.2, provided they met limits specified in Schedule 16. Additionally, the input of these contaminants to water was controlled through notified Rules 12.C.0.5 and 12.C.1.4.

We considered the submissions presented on notified Rule 12.C.1.2 and Schedule 16, and recommend changes to make the rules on Schedule 16 contaminants more achievable, workable and clear; while still achieving Schedule 15 standards. These changes include amending the time when Schedule 16 limits apply: instead of applying "twelve hours after rain ceases on site", the limits will apply when the flows are at or below a reference flow based on median.

3.6.1 Recommendations

(a) Incorporate notified Rules 12.C.1.2 and 12.C.1.5 into amended Rule 12.C.1.1 and clarify where and when Schedule 16 limits apply:

~~12.C.1.2 The discharge of a contaminant listed in Schedule 16 to:~~
~~(i) Water; or~~
~~(ii) Land in a manner that may enter water;~~
~~is a ***permitted*** activity, providing that more than twelve hours after rain ceases on the site, the quantity of contaminant in the discharge does not exceed the limits given in Schedule 16, where the discharge is about to enter water.~~

~~12.C.1.5 The discharge of water to water, or water to a Regionally Significant Wetland, that:~~
~~(i) Does not discharge water from one catchment to another; and~~
~~(ii) Where it contains any of the contaminants listed in Schedule 16, the quantity of contaminant in the discharge does not exceed the limits given in Schedule 16.~~
~~is a ***permitted*** activity, providing:~~
~~(a) There is no change to the water level or hydrological function, or no damage to fauna, or New Zealand native flora in or on any Regionally Significant Wetland.~~

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:
...
(d) Where the discharge first enters water in any lake, river, wetland, or any open drain or water race that flows to a lake, river or wetland; the discharge:
(1) From 01 April 2020, does not exceed the relevant limits given in Schedule 16A, when, at the representative flow monitoring site, the water flow is at or below the reference flow indicated in Schedule 16B; and

...

(b) Amend the structure of Schedule 16, identify reference flow sites in a map (see Appendix 1) and representative flows at these flow sites, in order to clarify when Schedule 16 limits apply:

Schedule 16 Schedule of discharge limits for water quality

Schedule 16 describes the contaminant concentration limits that are applicable to discharges to lakes, rivers, wetlands and drains or races flowing to lakes, rivers or wetlands, in the catchments of each discharge limit area. Discharge Limit Areas 1 and 2 catchments are shown on the J-series Maps. Discharges of contaminants described in this Schedule are permitted under Rule 12.C.1.1(d)(1) as long as the concentration limits are not exceeded when, at the representative monitoring site, the water flow is at or below reference flow.

16A Discharge limits for water quality by discharge limit area

....

16B Representative monitoring sites and reference flows

Map 16B Representative flow monitoring sites for every part of Otago

[see map in Appendix 1]

Representative flow monitoring sites are shown on the Water Info website (http://water.orc.govt.nz/WaterInfo/Default.aspx).

Table 16B Reference flows at each representative flow monitoring site

Reference flows are fixed and have been calculated using median flow data from 01/01/2007 to 01/01/2013.
River flows for Otago are available on the Water Info website (http://water.orc.govt.nz/WaterInfo/Default.aspx).

Monitoring Flow Site	Reference flow (cumecs)
Bengerburn at Booths	0.37
Cardrona at Mt Barker	1.95
Catlins at Houipapa	2.34
Dart at The Hillocks	51.49
Kakanui at Clifton Falls Bridge	1.29

Leith at University Foot Bridge	0.34
Lindis at Ardgour Road	3.50
Lindis at Lindis Peak	3.51
Lovells Creek at SH1	0.14
Manuherikia at Campground	11.60
Manuherikia at Ophir	8.01
Matukituki at West Wanaka	44.99
Mill Creek at Fish Trap	0.35
Nevis at Wentworth Station	7.25
Pomahaka at Burkes Ford	15.48
Pomahaka at Glenken	7.00
Shag at Craig Road	0.65
Shotover at Peats	18.12
Silverstream at Taieri Depot	0.30
Taieri at Canadian Flat	2.45
Taieri at Outram	15.86
Taieri at Sutton	10.52
Taieri at Tiroiti	7.88
Taieri at Waipiata	6.02
Tokomairiro at West Branch Bridge	0.44
Waianakarua at Browns	0.78
Waikouaiti at Confluence	1.34
Waitahuna at Tweeds Bridge	1.55
Waiwera at Maws Farm	1.58

(c) Amend Schedule 16 in order to revise the Schedule 16 limits, areas and timeframes:

Schedule 16 Schedule of discharge limits for water quality

...

Discharge Limit Area 1 [4] Catchments	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	*Escherichia coli*
Timeframe	~~31 March 2019~~ 01 April 2020	~~31 March 2017~~ 01 April 2020		

▪ **Carey's Creek** ▪ **Catlins** ▪ ~~Fleming~~ ▪ **Kaikorai** ▪ **Leith** ▪ **Mokoreta** (within Otago) ▪ **Owaka** ▪ **Pomahaka**, downstream of Glenken ▪ **Tahakopa** ▪ ~~Tautuku~~ ▪ **Tokomairiro** ▪ **Tuapeka** ▪ **Waitahuna** ▪ **Waitati** ▪ **Waiwera** ▪ Any ~~other~~ unlisted tributary on the true right bank of the **Clutha/Mata-Au**, south of Judge Creek ▪ Any unlisted tributary on the true left bank of the **Clutha/Mata-Au**, south of the Tuapeka ▪ Any ~~other~~ unlisted catchment that discharges to the **coast**, south of ~~the Matau Branch of the Clutha River/Mata-Au~~ Taieri Mouth	~~0.45~~ 3.6 mg/l	~~0.03~~ 0.045 mg/l	~~0.1~~ 0.2 mg/l	~~126~~ 550 cfu/100 ml

Discharge Limit Area 2 [1] Catchments	**Nitrate-nitrite nitrogen**	**Dissolved reactive phosphorus**	**Ammoniacal nitrogen**	***Escherichia coli***
Timeframe	~~31 March 2019~~ 01 April 2020	~~31 March 2017~~ 01 April 2020		
▪ ~~Arrow~~ ▪ **Cardrona** ▪ **Clutha/Mata-Au** (above Luggate) ▪ **Clutha/Mata-Au** and any ~~other~~ unlisted tributary (Luggate to mouth, including Lakes ~~Dunstan and~~ Roxburgh, and excluding tributaries described in Discharge Limit Area 1 catchments) ▪ **Fraser** ▪ **Kakanui** ▪ **Kawarau** ~~upstream of the Shotover confluence~~ ▪ **Lake Dunstan**	~~0.08~~ 1 mg/l	~~0.006~~ 0.035 mg/l	~~0.1~~ 0.2 mg/l	~~126~~ 550 cfu/100 ml

▪ **Lake Hawea** and any tributary ▪ **Lake Hayes** ▪ **Lake Johnson** ▪ **Lake Onslow** ▪ **Lake Tuakitoto** ▪ **Lake Waipori & Waihola** ▪ **Lake Wakatipu** and any tributary ▪ **Lake Wanaka** and any tributary ▪ **Lindis** ▪ **Luggate** ▪ **Manuherikia** ▪ **Mill Creek** (tributary to Lake Hayes) ▪ **Pomahaka,** upstream of Glenken ▪ **Shag** ▪ **Shotover** ▪ **Taieri** ~~▪ Tokomairiro~~ ▪ **Trotters** ▪ **Waianakarua** ▪ **Waikouaiti** ~~▪ Waitahuna~~ ▪ **Waipori** ▪ **Waitaki** tributaries within Otago ▪ Any ~~other~~ unlisted catchment that discharges to the **coast,** north of Taieri Mouth ~~the Matau Branch of the Clutha River/Mata-Au~~ ~~▪ Any tributaries to Lakes Hawea, Wakatipu, and Wanaka~~ ▪ ~~Dart~~				

mg/l = milligrams per litre
cfu/100 ml = colony-forming units per 100 millilitres

~~[1]Areas 1 and 2 are shown in Maps J1–J9.~~

(d) Amend the J-Series maps in order to reflect the changes to Schedule 16 discharge limit areas, as shown in Appendix 1, attached.

3.6.2 Reasons

- **The use of "reference flows" to determine when Schedule 16 limits apply**

River flows are considered a better indicator of environmental conditions than rainfall, as flows relate to both rainfall and the receiving environment's assimilative properties. Recreational contact and the risk of algal bloom are at their highest at low flows.

Land managers are given more certainty when Schedule 16 limits apply by attributing to every part of Otago a representative flow monitoring site in Map 16B.1 and defining a reference flow for each of these sites in Table 16B.1. The reference flows are fixed and are calculated using median flow data collected from 2007 to 2013.

Map 16B.1 and Table 16B.1 will also be available on the Water Info website, which already makes river flow data available.

- **Where the discharge limits apply**

Plan Change 6A seeks to protect water quality in all of Otago lakes, rivers, wetlands and groundwater. Schedule 16 limits therefore only apply to discharges to lakes, rivers, wetlands, or to open drains or races that flow in one of those water bodies, where the discharge first enters water in any one of those water courses. The limits apply to the discharge before any assimilation with the receiving water, and compliance is assessed at the point which gives the best indication of the discharge's contaminant concentration where the discharge is occurring.

- **Nitrogen and phosphorus**

Setting limits for nutrient concentrations in rivers and streams is complex. The concentrations at which nitrogen or phosphorus begin to have an adverse effect is highly site and catchment specific, and depends on many factors. The notified limits for nitrite-nitrogen (NNN) and dissolved reactive phosphorus (DRP) were equivalent to the notified receiving water standards in Schedule 15. This lessened the need to protect against cumulative effects. However receiving waters have assimilative capacity and therefore the discharge limits should be reconsidered in terms of effects and achievability.

The amended limits are based on the sampling data collected by ORC as part of its Pomahaka study and used by AgResearch (McDowell et al. 2011): sampling results indicate that where discharges exceed the recommended values, it can usually be linked to poor management practices.

Setting the NNN limit at 3.6 mg/l for discharges in area 1 and at 1 mg/l for discharges in area 2 is considered appropriate. The toxicity guidelines (Hickey, C.W, Martin, M.L., 2009) assesses that a NNN concentration of 3.6 mg/l in lakes and rivers offers a 80% species protection, while a concentration in NNN of 1 mg/l in lakes and rivers offers a 99% species protection, from long term effects due to long term exposure.

The amended limits for DRP are derived from the 95th percentile of the SOE monitoring data, collected from July 2006 to June 2011, on Schedule 15 Water Quality Groups 1 and 2. The use of the 95th percentile keeps the limits within the

values known to occur most of the time in the main water body, including assimilative factors.

Drainage sampling results show that these limits are achievable.

- **Ammoniacal nitrogen**

At high concentrations, ammoniacal nitrogen can be toxic and contributes to eutrophication. In farmed catchments, elevated concentrations generally arise from stock effluent reaching water through direct discharge, paddock run-off, or stock access to stream banks and beds. The effects are intensified when stream flows are low, or when stock are frequently near water bodies. Run-off and leaching of urea fertiliser can also contribute.

The notified limits for ammoniacal nitrogen were equivalent to the notified receiving water standards in Schedule 15. This lessened the need to protect against cumulative effects. However receiving waters have assimilative capacity and therefore the discharge limits have been reconsidered in terms of effects and achievability.

Again, the sampling results collected by ORC shows that the amended results are achievable under good management practices and will allow Schedule 15 targets to be met.

- **E coli**

Faecal contamination of water bodies poses a health risk to people and livestock. Faecal material reaches streams from effluent run-off and stock defecating directly into water. The risk of illness is primarily associated with recreational activities where water may be ingested through fish and other aquatic food. *E coli* is the indicator bacteria commonly used to assess presence of all bacterial, viral and protozoal pathogens that occur in faecal material.

The notified limits for *E coli* were equivalent to the notified receiving water standards in Schedule 15. This lessened the need to protect against cumulative effects. Limits for *E coli* need to protect against cumulative effects, but can allow for the use of some receiving water assimilative capacity, as long as contact recreation values are maintained. As such the discharge limits should be reconsidered in terms of effects and achievability.

The recommended amended discharge limit is 550 cfu/100ml. Sampling data show that this limit is achievable. It is also based on the MfE/MoH 2002 Microbiological water quality guidelines, and offers good protection to the secondary recreation values, even at the point of discharge.

- **Transition times**

The timeframe for meeting Schedule 16 limits has been extended from the notified dates to 1 April 2020. An eight-year transition time is considered appropriate for land managers to implement changes to their land management practices to meet the permitted discharge limits.

- **Catchment classification**

Catchments in Schedule 16 are classified into 2 areas, based on the frequency of higher flows that strip algae growth from its substrate. Area 1 has more of these flows, while Area 2 has less. As such, Schedule 16 discharge limits for nitrogen and phosphorus in Area 1 are higher. There is no difference in Schedule 16 discharge limits for ammoniacal nitrogen and *E coli* as those contaminants have adverse effects regardless of high flow frequency.

The catchment classification has been adjusted based on the Water Groups identified in Schedule 15. Those changes are discussed in section 2.2 of this report. The J-series maps have been adjusted accordingly, and have been amended to show the areas' boundaries.

3.7 Discharges from dams and water races

The notified plan change provided an exemption from the discharge limits, and permitted discharges of water to water, where the water was "passing through" water supply transport systems and permitted dams.

We considered the submissions presented, and recommend the scope of the "passing-through" rule be clarified.

3.7.1 Recommendations

(a) Amend notified Rule 12.C.1.6 in order to clarify the scope of the rule:

12.C.1.~~6~~.2Notwithstanding Rules 12.C.1.1~~, 12.C.1.2 and 12.C.1.5~~, the discharge of water or any contaminant~~s listed in Schedule 16~~ from:

(i) A water race that does not convey irrigation runoff; or

(ii) A dam;

(1) P~~p~~ermitted under Rule 13.2.1.3 ~~12.3.2.1~~; and ~~or~~

(2) Not for the purpose of the storage of contaminants,

~~(ii) water supply transport system,~~

to any lake, river, wetland or any water race that flows to a lake, river or wetland ~~water, or to a Regionally Significant Wetland~~, is a ***permitted*** activity, providing:

(a) The race or dam operator has not caused the contaminant to be discharged into the race or dam from which it is discharged; and

(~~a~~b) There is no discharge of water from one catchment to water in another catchment; and

(~~f~~c) There is no change to the water level range or hydrological function of~~, or no damage to fauna, or New Zealand native flora in or on~~ any Regionally Significant Wetland; and

(d) The discharge does not:

(1) Result in flooding, erosion, land instability or property damage; and

(2) Result in a conspicuous change in colour or clarity; and

(3) Have floatable or suspended materials.

~~(b) The dam is not used for the storage of contaminants; and~~
~~(c) The presence of contaminants does not result from the damming activity or the activities of the dam operator; and~~
~~(d) The presence of contaminants does not result from the water transporting activity, or the activities of the water transporter; and~~
~~(e) The water supply transport system does not convey irrigation runoff; and~~

...

3.7.2 Reasons

- **Water being "passed through"**

Where a race or dam operator has not caused the contaminant to be discharged into the race or dam from which it is discharged, it is appropriate to permit the water to be "passed through". This applies to discharges from small permitted activity dams that are not used for the storage of contaminants, and to the surplus of water diverted for irrigation water supply. Note that a similar provision for discharges from larger consented dams is in section 12.B of the Water Plan. See section 3.11 of this report.

In the notified rule, permitted activity dams were defined in reference to rule 12.3.2.1, which permits the damming of water. They are now defined in reference to rule 13.2.1.3, which permits the building of dams on the bed of a lake or a river. This does not change the meaning of re-numbered Rule 12.C.1.2.

The term "water supply transport system" has been clarified and is now any water race that diverts and transports water without catching irrigation runoff.

Moving notified conditions (b) and (e) into the description of the activity clarifies that discharges from dams used for the storage of contaminants or from water races catching irrigation runoff need to meet the conditions of new Rule 12.C.1.1 to be permitted, or such discharges will require consent.

Conditions are added to the notified rule to ensure compliance with Section 70 RMA. The condition on flooding, erosion and property damage also results from the deletion of notified Rule 12.C.0.3 See section 3.3 of this report.

3.8 Inter-catchment transfers and discharges to Regionally Significant Wetlands

The notified plan change permitted discharges of water to water providing adverse effects on Regionally Significant Wetlands were no more than minor, and the discharges did not transfer water from one catchment to another.

We considered the submissions and evidence received and we recommend that these conditions be transferred to the permitted activity rules, and aligned with the wording in Plan Change 2: Regionally Significant Wetlands.

3.8.1 Recommendations

(a) Delete notified Rule 12.C.1.5 and incorporate its content into new Rule 12.C.1.1:

~~12.C.1.5 The discharge of water to water, or water to a Regionally Significant Wetland, that:~~
~~(i) Does not discharge water from one catchment to another; and~~
~~(ii) Where it contains any of the contaminants listed in Schedule 16, the quantity of contaminant in the discharge does not exceed the limits given in Schedule 16.~~
~~is a *permitted* activity, providing:~~
~~(a) There is no change to the water level or hydrological function, or no damage to fauna, or New Zealand native flora in or on any Regionally Significant Wetland.~~

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:

...

(b) There is no discharge of water from one catchment to water in another catchment; and

(c) The discharge does not change the water level range or hydrological function of any Regionally Significant Wetland; and

...

(b) Amend notified Rule 12.C.1.6(f):

12.C.1.~~6~~.2 Notwithstanding Rule~~s~~ 12.C.1.1~~, 12.C.1.2 and 12.C.1.5~~, the discharge of water or any contaminant~~s listed in Schedule 16~~ from:

(i) A water race that does not convey irrigation runoff; or

(ii) A dam;

(1) P~~p~~ermitted under Rule 13.2.1.3 ~~12.3.2.1~~; and ~~or~~

(2) Not for the purpose of the storage of contaminants,

~~(ii) water supply transport system,~~

to any lake, river, wetland or any water race that flows to a lake, river or wetland ~~water, or to a Regionally Significant Wetland~~, is a ***permitted*** activity, providing:

...

(~~a~~b) There is no discharge of water from one catchment to water in another catchment; and

(~~f~~c) There is no change to the water level range or hydrological function of~~, or no damage to fauna, or New Zealand native flora in or on~~ any Regionally Significant Wetland; and

...

3.8.2 Reasons

- **Effects of discharges of water to Regionally Significant Wetlands**

Condition (a) of notified Rule 12.C.1.5 and Condition (f) of notified Rule 12.C.1.6 required "no" change to the water level or hydrological function, and "no" damage to fauna, or NZ native flora in a Regionally Significant Wetland. This condition originated from notified Proposed Plan Change 2: Regionally Significant Wetlands. It is now appropriate to use the wording from the ORC Decisions on Proposed Plan Change 2: Regionally Significant Wetlands. The "hydrological function" and "water level range" of such a wetland should not be changed.

- **Inter-catchment transfers**

Issue 6.2.5 of the Water Plan recognises the possible adverse effects of inter-catchment transfers of water. It is consistent with the rest of the Water Plan not to permit those discharges, but to give them a consent option. See section 3.10 of this report.

3.9 Nitrogen loading

The notified plan change included a number of provisions that sought to manage nitrogen leaching to groundwater. Notified Rule 12.C.1.3 permitted the discharge of nitrogen to groundwater provided specified calculated leaching rates were not exceeded. These applied in various nitrogen sensitive zones, and in the rest of Otago, as shown in the notified I-series of the maps. Notified Rule 12.B.1.5 permitted the discharge of fertiliser, as long as the requirements of notified Rule 12.C.1.3 were met. See section 3.11 of this report.

We considered the submissions presented, and recommend amendments that increase the clarity of the relevant provisions and maps, and that relax the nitrogen leaching limits for specific areas within Otago.

3.9.1 Recommendations

(a) Amend Rule 12.C.1.3 in order to provide more clarity, and to revise the nitrogen leaching rates:

12.C.1.3 The discharge of nitrogen[1] ~~from~~ onto or into land in circumstances which may result in nitrogen entering ~~to~~ groundwater, is a ***permitted*** activity, providing:

(~~i~~a) From ~~31 March 2019~~01 April 2020, ~~calculated nitrogen~~the nitrogen leaching rate ~~by the Council using OVERSEER® version 6.0.~~ does not exceed:

(~~a~~i) 10 ~~kilograms nitrogen per hectare per year~~ kgN/ha/year on that area of the landholding located over the relevant ~~any~~ ~~n~~Nitrogen ~~s~~Sensitive ~~z~~Zone identified in Maps ~~H1-H6~~ H5 and H6; and

(ii) 20 kgN/ha/year on that area of the landholding located over the relevant Nitrogen Sensitive Zone identified in Maps H1 to H4; and

(~~b~~iii) 30 ~~kilograms nitrogen per hectare per year~~ kgN/ha/year on that area of the landholding located outside any Nitrogen Sensitive Zone identified in Maps H1 to H6, ~~elsewhere in Otago;~~ as calculated using OVERSEER® version 6.0; and

(~~ii~~b) From 1 May 2014, the landholder ~~Upon request, the person with responsibility for the management of the land supplies the~~ will:

(i) Maintain a record of all necessary data to run OVERSEER® version 6.0; and

(ii) Provide Council upon request with :

(1) An OVERSEER® version 6.0 output and input parameter report prepared by an accredited OVERSEER® version 6.0 user; or

(2) ~~a~~All necessary ~~annual input~~ data to run OVERSEER® version 6.0.

[1] For the purpose of Rule 12.C.1.3, ~~N~~nitrogen comprises of organic nitrogen, ammoniacal nitrogen, nitrite nitrogen and nitrate nitrogen forms.

(c) Amend the notified I-series maps, as shown in Appendix 1, by:

(i) Changing the labels of the notified I-series of the Maps to refer to the H-series;
(ii) Changing the legend of amended Maps H1-H6 to provide more clarity;
(iii) Adjusting the boundaries of the Ettrick and Roxburgh aquifers on amended Map H4;
(iv) Removing Taieri Aquifer Recharge Zone from notified Map I3; and
(v) Moving Wakatipu Aquifer from notified Map I5 to new Map H3.

3.9.2 Reasons

- **Transition times**

From 1 May 2014, landholders are required to make OVERSEER data available to the ORC. This data will only be requested for education and monitoring purposes until 1 April 2020.

The timeframe for meeting the nitrogen leaching limits has been extended to 1 April 2020. This is considered adequate time for landholders to reduce their nitrogen leaching loss by utilising recognised and proven management techniques. If landholders do not meet the leaching limits in the permitted activity rule by 1 April 2020, they may apply for consent which would allow more time to comply with the permitted rule.

- **Clarity and consistency**

Rule 12.C.1.3 has been amended to clarify the area over which the nitrogen leaching limits apply. The limits apply to the average value calculated over the entire landholding. Where the landholding is located over two different nitrogen leaching zones, a separate calculation will be required for each one.

The words "landholding" and "landholder" are defined in the glossary of the operative Water Plan.

Further amendments to the wording of Rule 12.C.1.3 achieve greater consistency with the RMA terminology and with the wording of the wider suite of rules in the amended section 12.C.

- **Nitrogen leaching limits and areas**

It is appropriate to change the notified nitrogen leaching limits, based on ORC's further modelling of nitrogen accumulation. The nitrogen leaching limit for the Kakanui-Kauru Aquifer, Shag Alluvium Aquifer, Ettrick and Roxburgh Aquifers, and the Wakatipu Aquifer should be raised from 10 kgN/ha/yr to 20 kgN/ha/yr. The nitrogen leaching limit for the Taieri Aquifer recharge zone should be brought in line with the 30 kgN/ha/yr limit that applies to the rest of Otago.

No further changes to the notified nitrogen leaching limits for specific areas in Otago are appropriate. It is not desirable to raise these limits on the nitrogen-sensitive zones identified on notified maps I5 and I6, as the current limit of 10 kgN/ha/yr is necessary to protect the pristine state of the lakes in this area.

Due to the potential for land use intensification in the Waitaki Plains area, it is appropriate to retain the notified leaching limit at 30 kgN/ha/yr. In the long term this will protect water quality.

The Hawea Aquifer is not identified as a nitrogen sensitive zone. Modelling of nitrate indicates that if the leaching limit of 30 kgN/ha/yr were adopted, land use intensification would not degrade water quality in the aquifer.

The notified I-Series of the Maps should be amended to incorporate the above changes.

- **H-series of the Water Plan Maps (notified I-series)**

Reducing the areas of the Ettrick, Roxburgh and the Wakatipu Aquifers on notified Map I4 on notified Maps I4 and I5, and removing the Taieri Aquifer Recharge Zone from notified Map I3 is based on a re-evaluation by ORC's resource science team.

The labels of the notified I-series of the Maps have been amended to refer to the H-series, as the "I" can be easily misread as the numerical value "1".

Additional amendments to the notified maps, such as the inclusion of a new Map H3 for the Wakatipu Basin Aquifer (previously shown on notified Map I5) and minor changes to the layout of the maps and the information displayed in the legend, make the maps easier to use.

The resolution of the maps does not need to be changed. Once they are operative, they will be moved into the Regional Plan: Water Maps, presented in A3 size. GIS data or supporting maps, such as aerial photographs, can be requested from ORC if there is doubt about the exact extent of nitrogen sensitive zones.

- **Future research**

We recommend that ORC should undertake further research into the properties of individual aquifers, their connectivity with other water bodies, and the hydrological characteristic of overlaying soils. Where necessary, aquifer boundaries and relevant nitrogen loading limits will be reviewed and incorporated into the Water Plan through future plan changes.

- **Land uses**

In order for the Water Plan to be effective and ensure good environmental outcomes, all land uses, whether intensive or extensive, need to be subject to the rule framework. Currently not all land uses are equally well provided for in OVERSEER, especially horticulture and cropping. We understand that OVERSEER modules for these sectors are being developed. However, each of these land-uses produces nitrogen leachate, and there is currently no alternative means of calculating nutrient leaching for horticulture and cropping. Therefore no land uses should be excluded from Rule 12.C.1.3.

- **Use of OVERSEER in a regulatory context**

Given the practical difficulties with scientifically measuring nitrogen leachate, it is appropriate to use a nutrient budget model to calculate nitrogen losses to groundwater. The use of OVERSEER as a management tool within a regulatory context has been endorsed by the Environment Court.

- **Reference to OVERSEER Version 6.0 in Rule 12.C.1.3**

Schedule 1, Part 3 of the RMA allows for the incorporation of documents by reference in plans and proposed plans. The version number for OVERSEER must be stated within the rule to provide certainty about which version is referred to. There will need to be future plan changes to allow future versions of OVERSEER to be incorporated into the Water Plan.

- **The information provision requirement**

The amendments to the wording of the information requirement provide clarification but do not change the meaning of the requirement.

The amendments also give landholders the choice to either submit baseline data, or an OVERSEER input and output report. This will reduce the administrative burden for landholders, and will also reduce the risk of inconsistencies between the OVERSEER reports provided by landholders, and those prepared by ORC staff.

The information requirement applies from 1 May 2014, while compliance with the nitrogen leaching limits is not required until 1 April 2020. Any information required before 1 April 2020 will only be used to monitor trends in land use, to investigate the relationship between land uses and water quality trends, and to assist landholders in their efforts to reduce nitrogen leaching rates from their properties and meet the standards.

After 1 April 2020, received OVERSEER data will be the main instrument for Council to determine compliance with the relevant nitrogen leaching limits. It is at the discretion of ORC to determine compliance with the rule. It is recognised that a suitably qualified person will be required to undertake OVERSEER work within ORC. It is not seen necessary to state this within the rule.

- **Consent options**

See section 3.10 of this report for discussion on nitrogen leaching to groundwater that requires consent.

3.10 Discharge consent options

The notified plan change was largely based on a permitted/prohibited rule framework. The rules in section 12.C only provided limited consent options. Where no consent option was specified, Section 87B(1)(a) RMA would apply, and any application for consent would be treated as an application for a resource consent for a discretionary activity.

We considered the submissions presented, and recommend amending the notified rules to provide clarity on activity status, to ensure different discharges have the appropriate activity status, and to encourage those who need consents to progressively work towards achieving permitted activity standards.

3.10.1 Recommendations

(a) Replace notified Rule 12.C.2.1 with new Rules 12.C.2.1, 12.C.2.2 and 12.C.2.3:

~~12.C.2.1: The discharge of contaminants listed in Schedule 16 to land:~~
~~(i) Where changes to land management or infrastructure have been unsuccessful in meeting the limits in Schedule 16, and the discharge first occurred prior to 31 March 2012; or~~
~~(ii) Where the discharge results from a short-term activity with a short-term adverse effect.~~
~~is a *restricted discretionary* activity.~~

...

~~The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.~~

12.C.2.1 The discharge of water or any contaminant:
(i) To water; or
(ii) Onto or into land in circumstances which may result in that contaminant entering water,
is a ***restricted discretionary*** activity, unless the discharge:
(a) Is prohibited by a rule in 12.C.0; or
(b) Is permitted by Rules 12.C.1.1 or 12.C.1.2; or

(c) Will result in flooding, erosion, land instability or property damage; or
(d) Is of water from one catchment to water in another catchment; or
(e) Will change the water level range or hydrological function of any Regionally Significant Wetland; or
(f) Has previously been authorised by resource consent granted under this rule.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.2 The discharge of water or any contaminant:
(i) To water; or
(ii) Onto or into land in circumstances which may result in that contaminant entering water,
from a short-term activity with a short-term effect, is a ***restricted discretionary*** activity, unless the discharge:
(a) Is prohibited by a rule in 12.C.0; or
(b) Is permitted by Rules 12.C.1.1 or 12.C.1.2; or
(c) Will result in flooding, erosion, land instability or property damage; or
(d) Is of water from one catchment to water in another catchment; or
(e) Will change the water level range or hydrological function of any Regionally Significant Wetland.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.3 The discharge of nitrogen onto or into land in circumstances which may result in nitrogen entering groundwater is a ***restricted discretionary*** activity, unless the discharge:
(a) Is prohibited by a rule in 12.C.0; or
(b) Is permitted by Rule 12.C.1.3, or
(c) Has previously been authorised by a resource consent granted under this rule;

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

(b) Replace the list of discretions in notified Rule 12.C.2.1 with an extended new Rule 12.C.2.4 in order to provide greater consent guidance:

~~12.C.2.1: The discharge of contaminants listed in Schedule 16 to land:~~

~~.....~~

~~The matters to which the Council will restrict its discretion are:~~

~~(a) The nature, type, volume, frequency, concentration of contaminants in the discharge; and~~

~~(b) In the case of applications made under (i), how discharge limits in Schedule 16 will be achieved within a set timeframe; and~~

~~(c) Any quality management practices to be implemented; and~~

~~(d) Any changes to infrastructure; and~~

~~(e) Addressing any adverse effects on water quality, including cumulative effects; and~~

~~(f) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and~~

~~(g) The likelihood of erosion, land instability, sedimentation or property damage resulting from the discharge; and~~

~~(h) Any financial contribution for any Regionally Significant Wetland or on any regionally significant wetland value; and~~

~~(i) The information and monitoring requirements; and~~

~~(j) The duration of the resource consent; and~~

~~(k) The review of conditions of the resource consent.~~

~~The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.~~

12.C.2.4 Restricted discretionary activity discretions

In considering any resource consent in terms of Rules 12.C.2.1 to 12.C.2.3, the Council will restrict the exercise of its discretion to:

(a) The nature, type, volume, frequency of the discharge; and

(b) The concentration and loading of contaminants in the discharge; and

(c) In the case of an application under Rules 12.C.2.1 and 12.C.2.3, the staged timeframe for achieving the permitted activity conditions in Rules 12.C.1.1 or 12.C.1.3; and

(d) In the case of an application under 12.C.2.2, the staged timeframe to address adverse effects on water quality; and

(e) In the case of an application previously consented under Rule 12.C.2.2, compliance with conditions of the previous resource consent; and

(f) Any changes to infrastructure and the staging of implementation of those changes; and

(g) Any adverse effects on water quality, including cumulative effects; and

(h) Any adverse effect of the discharge on any natural or human use values; and

(i) The extent to which the contaminant results from the activities of the applicant: and
(j) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
(k) Any erosion, land instability, sedimentation or property damage resulting from the discharge; and
(l) Any financial contribution for any Regionally Significant Wetland or on any regionally significant wetland value; and
(m) The information and monitoring requirements; and
(n) The duration of the resource consent; and
(o) The review of conditions of the resource consent.

(c) Delete notified Rule 12.C.2.2 and add new Rule 12.C.3.1 in order to change the activity status of discharges of water from one catchment to water in another:

~~12.C.2.2: The discharge of water from one catchment to another catchment is a *restricted discretionary* activity.~~

~~The matters to which the Council will restrict its discretion are:~~
~~(a) Concerns of Iwi; and~~
~~(b) The nature, volume, rate and method of the discharge; and~~
~~(c) The location of the discharge; and~~
~~(d) Any introduction of new or pest species; and~~
~~(e) Any contaminants in the discharge; and~~
~~(f) The likelihood of erosion, land instability, sedimentation or property damage resulting from the discharge; and~~
~~(g) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and~~
~~(h) Any financial contribution for any Regionally Significant Wetland or on any regionally significant wetland value; and~~
~~(i) The duration of the resource consent; and~~
~~(j) The information and monitoring requirements; and~~
~~(k) The review of conditions of the resource consent.~~

~~The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.~~

12.C.3.1 The discharge of water from one catchment to water in another catchment is a ***discretionary*** activity.

(d) Add a new catch-all discretionary Rule 12.C.3.2:

12.C.3.2 The discharge of water or any contaminant:
(i) To water;
(ii) Onto or into land in circumstances which may result in that

contaminant entering water,
is a ***discretionary*** activity, unless it is:
(a) Prohibited by a rule in 12.C.0; or
(b) Permitted by a rule in 12.C.1; or
(c) Provided for by a Rule 12.C.2.

3.10.2 Reasons

- **Scope of the restricted discretionary activity rules**

Discharges of Schedule 16 contaminants that exceeded the limits, from a short-term activity or an existing activity, were restricted discretionary under notified Rule 12.C.2.1.

Under new restricted discretionary Rules 12.C.2.1, 12.C.2.2 and 12.C.2.3, any discharge that breaches the permitted activity conditions relating to the level of contaminants in the discharge is restricted discretionary. Setting a specific regime for existing uses is inappropriate. The provisions for short-term activities with short-term adverse effects remain.

New Rule 12.C.1.4 provides guidance when considering resource consent applications for activities that fall under the new restricted discretionary activity rules 12.C.2.1, 12.C.2.2 and 12.C.2.3. It is appropriate to amend this to reflect recommended changes to the policies and rules discussed elsewhere in this report:

- See sections 2.3 and 2.4 for further detail regarding policy for consenting.
- See sections 3.5, 3.6, 3.7 for further detail regarding discharges of Schedule 16 contaminants, sediment and water.
- See section 3.9 for further detail regarding discharges of nitrogen to groundwater.

- **Working towards permitted activity standards**

The plan change aims to achieve good quality water in Otago by encouraging progress towards meeting the permitted activity rules.

The consenting rules recognise that for some land users the transition times in the permitted rules may not be long enough to comply with relevant discharge limits or conditions. However practices which detract from achieving good quality water in Otago should not be encouraged through the consenting regime.

The recommended amendments address this by:

1. Restricting the duration of resource consents for discharges that fail to meet the permitted activity conditions to 5 years. See section 2.4 of this report.
2. Making discharges that have previously been authorised by a resource consent under new Rules 12.C.2.1 and 12.C.2.3, discretionary rather than restricted discretionary.

3. Requiring consent applicants to demonstrate how they will work towards achieving compliance with the permitted rules. See section 2.4 of this report on the policy framework.

Note that these amendments do not apply to discharges that result from a short-term activity with short-term adverse effects.

- **Catch all rule 12.C.3.2**

The discretionary consent option in new Rule 12.C.3.2 explicitly provides for all other discharges, so reference back to Section 87 of the RMA is not required.

- **Reviewing existing consents**

Existing discharge permits can continue to operate until they expire. Once the plan change becomes operative and there are rules relating to minimum standards of water quality, these may be reviewed under Section 128(1)(b) RMA.

- **Clarity and consistency**

The new rules in sections 12.C.2 and 12.C.3 have been drafted to achieve consistency with the RMA terminology and with the wording of the wider suite of rules in the amended sections 12.C.0 and 12.C.1.

- **Notification and discharges with wider impact**

See section 5.4 of this report.

3.11 Rules in section 12.B

Section 12.B of the notified plan change retained, largely unchanged, most of the operative provisions from sections 12.4 to 12.13. These covered discharges including human sewage, hazardous substances, and discharges from industrial or trade premises.

We considered the submissions presented at the hearings and recommend amendments, and the reinstatement of certain rules.

3.11.1 Recommendations

(a) Amend the heading to 12.B in order to include explicitly discharges from consented dams in section 12.B:

> **12.~~7~~B Discharge of ~~pesticides~~ hazardous substances, hazardous wastes, ~~other~~ specified contaminants, and stormwater; and discharges from industrial ~~and~~ or trade premises and consented dams**

(b) Move operative Water Plan Rules 12.12.1.1 and 12.12.1.2 (deleted in notified the plan change) into section 12.B as new Rules 12.B.1.10 and 12.B.1.11 respectively, and amend new Rule 12.B.1.10 in order to provide certainty to consented dam owners:

~~12.12.1.1 The discharge of any contaminant, excluding settled sediment, present in water impounded by a dam, to water in a lake or river, is a ***permitted*** activity, providing:~~

~~(a) The dam is not used for the storage of contaminants; and~~

~~(b) The presence of the contaminant does not result from the damming activity or the activities of the dam operator; and~~

~~(c) The discharge, after reasonable mixing does not give rise to all or any of the following effects:~~

~~(i) The production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials; or~~

~~(ii) Any conspicuous change in colour or visual clarity; or~~

~~(iii) Any emission of objectionable odour; or~~

~~(iv) The rendering of fresh water unsuitable for consumption by farm animals; or~~

~~(v) Any significant adverse effect on aquatic life; and~~

~~(d) The discharge ceases when an enforcement officer of the Otago Regional Council requires the discharge to cease to provide for clean-up operations and prevent adverse effects on the environment.~~

~~12.12.1.2 Except as provided for by Rule 12.12.1.1, the discharge of a trace amount of any contaminant, originating from within a hydro-electric power structure, into water, is a ***permitted*** activity.~~

~~**Principal reasons for adopting**~~

~~Rule 12.12.1.1 recognises that a dam operator is not always able to control what enters and leaves a dam. Environmental safeguards are contained in Condition (d) and the discharge must cease if requested by an enforcement officer for containment and clean-up operations.~~

~~Rule 12.12.1.2 recognises that minute amounts of contaminants may be discharged from hydro-electric facilities during normal operations without any measurable adverse effect on the environment.~~

12.B.1.10 *[Moved substantially unchanged from 12.12.1.1]* The discharge of any contaminant, excluding settled sediment, present in water impounded by a dam that is not permitted by Rule 13.2.1.3, to water in a lake or river, is a ***permitted*** activity, providing:

(a) The purpose of the dam is not ~~used~~ for the storage of contaminants; and

(b) The ~~presence of the contaminant does not result from the damming activity or the activities of the~~ dam operator has not caused the contaminant to be discharged into the dam from which it is discharged; and

(c) The discharge, after reasonable mixing does not give rise to all or any

of the following effects:

(i) The production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials; or

(ii) Any conspicuous change in colour or visual clarity; or

(iii) Any emission of objectionable odour; or

(iv) The rendering of fresh water unsuitable for consumption by farm animals; or

(v) Any significant adverse effect on aquatic life; and

(d) The discharge ceases when an enforcement officer of the Otago Regional Council requires the discharge to cease to provide for clean-up operations and prevent adverse effects on the environment.

12.B.1.11 *[Moved unchanged from 12.12.1.2]* Except as provided for by Rule 12.12.1.1, the discharge of a trace amount of any contaminant, originating from within a hydro-electric power structure, into water, is a ***permitted*** activity.

(c) Amend notified Rules 12.B.4.1 and 12.B.4.2, in order to provide consistency in wording and format:

12.B.4.1 ~~Any~~ The discharge of water (excluding stormwater) or any contaminant from an industrial or trade premises to ~~land or to~~ water or to land is a ***discretionary*** activity, unless it ~~complies with~~ is permitted by Rule~~s~~ 12.B.1.6 or 12.B.1.7, ~~is a *discretionary* activity~~.

12.B.4.~~2~~3 ~~Unless covered by Rule 12.B.4.1, a~~ The discharge ~~that does not comply with Rules 12.B.1.1 to 12.B.1.7~~ of water or any contaminant covered in section 12.B.1 or 12.B.2, to water or onto or into land in circumstances which may result in that contaminant entering water, is a ***discretionary*** activity, unless it is:

(a) Permitted by a rule in 12.B.1; or

(b) Provided for by a rule in 12.B.2, 12.B.3, 12.B.4.1 or 12.B.4.2..

(d) Add new Rule 12.B.4.2 that covers any hazardous substance in section 12.B:

12.B.4.2 The discharge of any hazardous substance to water or onto or into land in circumstances which may result in that substance entering water is a ***discretionary*** activity, unless it is:

(a) Permitted by a rule in 12.B.1; or

(b) Provided for by a rule in 12.B.2 or 12.B.3.

(e) Amend notified Rule 12.B.1.5 in order to clarify the relationship with Rule 12.C.1.3:

12.B.1.5 *[Moved from 12.8.1.5]* The discharge of fertiliser onto production land, in

circumstances where it may enter water, is a ***permitted*** activity, providing:

(a) All reasonable measures are taken to minimise any discharge of the fertiliser to water in any water body, drain or water race, or to the coastal marine area; and

(b) The discharge is carried out in accordance with the manufacturer's directions; and

(c) There is no damage to fauna or New Zealand native flora, in or on any Regionally Significant Wetland; and

(d) ~~It meets the provisions of~~ Any discharge of nitrogen also complies with Rule 12.C.1.3.

(f) Adopt the notified Glossary definition of Fertiliser:

(g) Amend notified Rules 12.B.1.1 and 12.B.1.4 in order to update the reference to Growsafe certificates:

12.B.1.1 ~~12.7.1.1~~ The discharge of any herbicide to water for the control of aquatic plants is a ***permitted*** activity, providing:

(a) The herbicide and any associated additive are authorised for aquatic use in New Zealand, and are used in accordance with the authorisation; and

(b) The discharge is carried out in accordance with any manufacturers' directions and is carried out by a person who holds a GROWSAFE Registered Chemical Applicator certificate ~~Growsafe Registered Applicator Certificate of Qualification~~; and

(c) ...

12.B.1.4 ~~12.7.1.4~~ Except as provided for by Rule ~~12.7.1.3~~ 12.B.1.3, the aerial discharge of any pesticide onto land in circumstances where it, or any contaminant associated with its breakdown, may enter water, is a ***permitted*** activity, providing:

(a) The pesticide is authorised for use in New Zealand and is used in accordance with the authorisation; and

(b) The discharge is carried out in accordance with any manufacturers' directions, by a person who holds a GROWSAFE Pilots Chemical Rating certificate ~~Growsafe Pilots' Agrichemical Rating Certificate of Qualification~~; and

(c) ...

3.11.2 Reasons

- **Consented dams**

It is appropriate to clarify that 12.B covers discharges from consented dams, including hydro-electricity dams. The water in these dams is recognised in the operative Water Plan as being vulnerable to contamination, while the discharge from the dam itself is not considered the source of any contamination.

Rules 12.B.1.10 and 12.B.1.11 are recommended to be reinstated to retain the present status of these discharges. Discharges through permitted activity dams are permitted by Rule 12.C.1.2 if contaminants do not result from the dam operator's activities.

- **Addition of Rule 12.B.4**

The addition of Rule 12.B.4.2 gives legal weight to the fact that section 12.B addresses discharges of hazardous substances. A discretionary activity needs to be provided for any discharge of a hazardous substance not covered by a permitted activity.

- **Consistency in wording**

The provisions in section 12.B.4 have been worded for internal consistency.

- **Fertiliser definition and permitted Rule 12.B.1.5 Condition (d) requirement for nitrogenous fertilisers**

Discharges covered in section 12.B are not subject to the rules in section 12.C. Without the reference to Rule 12.C.1.3 in Condition (d) of Rule 12.B.1.5, people discharging fertiliser that contains nitrogen would not be subject to meeting the nitrogen leaching limits identified within Rule 12.C.1.3.

It is appropriate to retain the definition of Fertiliser as notified. The definition builds on that in the operative plan, but explicitly excludes compost, effluent or seaweed. Fertilisers are classified as a hazardous substance so fall within the scope of the 12.B rules. Compost, effluent and seaweed are not hazardous substances, and discharges are covered by 12.C rules.

The definition as notified is not inconsistent with other definitions, such as the Code of Practice for the Sale of Fertilisers (Fertmark, 2002) and the Code of Practice for Nutrient Management (NZFMRA, 2007), and can be properly understood by all plan users.

- **Reference to Growsafe programmes for certain chemical applications**

The reference to Growsafe certification programmes in Rules 12.B.1.1 and 12.B.1.4 is out-of-date and is updated as a minor change. A reference to AIRCARE™ accreditation is not made as such a change could not be considered minor, and is beyond the scope of this plan change.

- **The need to exempt discharges in urban environments from the 12.C prohibitions**

The provisions in section 12.B address urban stormwater discharges and discharges from reticulated systems. They are not covered by the 12.C provisions.

- **Stormwater discharges**

Rules 12.B.1.8 and 12.B.1.9 relate to stormwater that results from impervious surfaces discharging from a reticulated stormwater system, and to stormwater discharging from

any road not connected to a reticulated stormwater system. A plan change is required to make any change to provisions relating to the discharge of stormwater.

- **Odourless or colourless toxins**

The Hazardous Substances and New Organisms Act 1996 and provisions in section 12.B regulate the discharge of odourless and colourless toxins.

CHAPTER 4 – LAND USE ON LAKE OR RIVER BEDS OR REGIONALLY SIGNIFICANT WETLANDS

This chapter addresses the construction and use of structures, and stock movement on the bed of a lake, river or Regionally Significant Wetland. Chapter 13 of the Water Plan sets out the rules relating to such activities.

4.1 Structures

The notified plan change added new provisions to address the use, construction and maintenance of structures on or over the beds of lakes, rivers, and Regionally Significant Wetlands. It made the construction of crossing structures, such as culverts, single span bridges, easier in order to promote their use and reduce the effects of bed disturbance by livestock.

We considered the submissions presented, and recommend some changes to the notified rules. These are intended to increase flexibility for land managers and to avoid some practical issues that arose with the notified rules.

4.1.1 Recommendations

(a) Amend notified Rules 13.1.1, 13.2.1.7 and 13.2.1.7B, in order to prevent animal waste from entering water:

13.1.1.1 The use of any structure that is fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

.....

(ba) Measures are taken to avoid a~~A~~nimal waste ~~is prevented from~~ entering the lake, river or Regionally Significant Wetland ~~water body~~; and

.....

13.2.1.7 The erection or placement of any single span bridge ~~or culvert in, on or~~ over the bed of a lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

.....

(g) Where the bridge is intended for use by stock, measures are taken to avoid animal waste entering the lake, river, or Regionally Significant Wetland.

13.2.1.7B Unless covered by Rule 13.2.1.7 or 13.2.1.7A, the erection or placement of any crossing in or on the bed of a lake or river, or Regionally Significant Wetland, is a ***permitted*** activity, providing:

.....

(g) Movement of bed material is not impeded; and

(h) Where the crossing is intended for use by stock, measures are taken to avoid animal waste entering the lake, river, or Regionally Significant

Wetland.

(b) Amend Rule 13.1.2.1 and notified Rule 13.2.1.7B, in order to provide consistent protection for Regionally Significant Wetlands:

13.1.2.1 Except as provided for by Rule 13.1.1.1, the use of a structure that is fixed in, on under or over the bed of any lake or river, or any Regionally Significant Wetland, is a ***restricted discretionary*** activity.

13.2.1.7B Unless covered by Rule 13.2.1.7 or 13.2.1.7A, the erection or placement of any crossing in or on the bed of a lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

(a) The crossing, or its erection or placement, does not cause any flooding, nor cause erosion of the bed or banks of the lake, ~~or~~ river, or Regionally Significant Wetland, or property damage; and

.....

(c) Amend notified Rule 13.2.1.7A, in order to provide greater clarity:

13.2.1.7A The erection or placement of any boardwalk in, on or over a Regionally Significant Wetland, is a ***permitted*** activity, providing:

~~(a) T~~the erection or placement, or the boardwalk, does not cause any flooding, nor any erosion.

(d)Amend notified Rule 13.2.1.7B, in order to facilitate the construction of crossings:

13.2.1.7B Unless covered by Rule 13.2.1.7 or 13.2.1.7A, the erection or placement of any crossing in or on the bed of a lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

....

(b) The top of the crossing is no higher than ~~1.5~~ 2 metres above the lowest part of the bed where it is located; and

(c) The crossing does not exceed ~~10~~ 12 metres along the length of the lake or river; and

(ca) No more than 24 metres of crossing occurs on any 250 metre stretch of any lake or river, with a minimum separation distance between any two crossings in or on the same lake or river of 12 metres; and

(d) There is no reduction in the flood conveyance of the lake, ~~or~~ river, or Regionally Significant Wetland; and

.....

(e) Adopt a new generic discretion, which applies to restricted discretionary activity Rules 13.1.2.1, 13.2.2.1 and 13.3.2.1, in order to allow for the consideration of measures to avoid animal waste entering the lake, river or Regionally Significant Wetland:

> (x) Any measures to avoid animal waste entering the lake, river or Regionally Significant Wetland.

(f) Amend Rule 13.2.2.1 as a consequential change:

> 13.2.2.1 Except as provided for by Rules 13.2.1.1, 13.2.1.2 and 13.2.1.5 to 13.2.1.7B, the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or *crossing*, in, on, under, or over the bed of any lake or river, is a ***restricted discretionary*** activity.
>
> In considering any resource consent for the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or *crossing* in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

4.1.2 Reasons

- **Use and placement of structures – "avoid animal waste"**

The prevention of animal waste getting into water is a condition of notified Rule 13.1.1.1. The notified condition was intended to encourage the use of crossings that effectively direct animal waste away from lakes, rivers and Regionally Significant Wetlands. The amendment to the condition better recognises that there may be circumstances where it is not technically or practically feasible to prevent all animal waste from entering the water body. However where crossing structures are being used by livestock measures must be taken to manage animal waste.

A new condition has been added to the notified Rules 13.1.2.7 and 13.1.2.7B to ensure that such measures are incorporated in the design of bridges and crossings that are intended for use by livestock.

The relationship that exists between Rules 13.1.1.1, 13.2.1.7B and 13.5.1.8B means that the construction and use of crossings for livestock movement may be undertaken as permitted activities, providing measures are taken to avoid animal waste entering water or, in the case of low standard design-type fords or crossings, the requirements of Rule 13.5.1.8B are met.

- **Better protection of Regionally Significant Wetlands**

The use of structures under notified Rule 13.1.1.1 extends protection from animal waste to Regionally Significant Wetlands. Where the permitted activity conditions of Rule 13.1.1.1 cannot be met, resource consent will be required. An appropriate

discretion is added to Rule 13.1.2.1. RMA Section 9 provides the legal basis for extending coverage of this rule to Regionally Significant Wetlands.

Notified Rule 13.2.1.7B has been amended to the same effect.

- **Restricted discretionary activity considerations**

Measures proposed to avoid animal waste entering water bodies need to be considered in consent applications. This is therefore included in the generic matters of discretion that apply to Rules 13.1.2.1, 13.2.2.1 and 13.3.2.1.

- **Width of crossings**

The permitted crossing width (along the river) for permitted activities in notified Rule 13.2.1.7B(c) can be increased from 10 metres to 12 metres to allow for low risk crossings in a wider range of situations. Due to the direct correlation between the length of a crossing and the height to which the structure can be safely constructed, the recommended amendment also allows for a limited increase of the maximum crossing height allowance without triggering any safety risks.

- **Height of crossings**

The maximum height standard for the top of crossings in Rule 13.2.1.7B(b) can be raised from 1.5 metres to 2 metres, because its other conditions adequately address adverse effects. It is not appropriate to allow for the construction of crossings higher than 2 metres as a permitted activity, because crossings are not regulated under the Building Act and it would be overly complex to specify construction standards, for safety, as part of a permitted activity rule. Furthermore, the height to which crossings can be safely constructed is controlled by the crossing length under condition (c). Where local topography requires the construction of a crossing that exceeds the maximum height specified in the permitted activity condition, a consenting option is available.

- **Structures and forestry activities**

We recognise the concerns of the forestry industry and other rural land users that some of the permitted activity conditions may restrict their ability to operate on steeper terrain. However we do not think it is appropriate to impose as rules industry codes that are developed for specific industry groups. The permitted activity conditions in Rule 13.2.1.7 have been relaxed to address some of these concerns. Where the permitted activity conditions cannot be met, landholders can apply for a consent.

- **Minimum distance requirement between crossings**

The recommended minimum distance requirement between crossings strengthens the notified provisions and reduces the loss of natural character and instream ecological values when crossings are too close together. Recommended new condition (ca) of Rule 13.2.1.7B will avoid significant adverse effects, while providing for any situation where physical constraints or legal boundaries require closer proximity among crossings. Where condition (ca) cannot be met, the options are to install a bridge and a crossing, or apply for a consent.

- **Use of flood conveyance or flood event criteria**

Consideration of specific flood event criteria is appropriate when designing crossings that exceed a certain scale or in a challenging physical environment or local climate. However, the combination of the permitted activity conditions in amended Rule 13.2.1.7B implicitly limits the scale of the permitted crossing installations and catchment size, thereby minimising the need for technically complex assessments of potential flood hazards. Therefore it is appropriate to retain the term "flood conveyance", as it provides a quick means of determining the suitability of the proposed crossings in low hazard-risk environments, while acting as an incentive to undertake more robust hydrological and flood hazard assessment in less certain situations.

- **Making the plan easier to read**

The minor change to notified Rule 13.2.1.7A makes this provision easier to read.

- **Definition of "crossing"**

Notified Rule 13.2.1.7 covers single span bridges, while Rule 13.2.1.7B covers all other crossings, including culverts and fords. There is no need to define the word "crossing" in the Glossary of the Water Plan. Defining it could result in some crossing types not being identified and being unintentionally excluded from the permitted activity rule. The word "crossing" in these rules is broad but sufficiently certain to be understood, applied consistently and enforced.

- **Retention of structure repair and maintenance provisions**

Activities on lake or river beds or Regionally Significant Wetlands related to the maintenance or repair of structures are sufficiently covered by Rules 13.3.1 and 13.5.1.3, which were not changed by the proposed plan change.

4.2 Activities in the beds of lakes and rivers and Regionally Significant Wetlands

Section 13.5 of the Regional Plan: Water contains rules that relate to a variety of activities that cause alteration of the beds of lakes and rivers and Regionally Significant Wetlands. The notified plan change amended section 13.5 in order to provide more flexibility for those undertaking these activities, while also reducing the effects of the associated disturbances and alterations on water quality.

We considered the submissions and recommend some changes to the notified rules.

4.2.1 Recommendations

(a) Add new Rule 13.5.A.1 and amend the note box at the start of section 13.5, in order to provide greater clarity and certainty:

> **13.5 Alteration of the bed of a lake or river,** *or of a Regionally*

Significant Wetland

13.5.A General rules for Section 13.5

13.5.A.1 Discharges of bed material resulting from the alteration of the bed of a lake or river, or a Regionally Significant Wetland, are addressed only through rules in section 13.5.

Note: Alteration includes any disturbance, and the associated remobilisation (discharge) and redeposition (deposit) of bed material ~~sediments~~ already present, reclamation or deposition of cleanfill associated with works in the bed. ~~Under the Regional Plan: Water, reclamation and deposition of cleanfill associated with works in the bed of a lake or river, or wetland, are addressed through disturbance rules in Section 13.5, and not through discharge rules in Section 12.C~~.

(b) Insert in notified Rules 13.5.1.1 and 13.5.1.2, and in operative Rules 13.5.1.5 and 13.5.1.9, and Rule 13.5.1.5B, the following wording after "The disturbance of the bed of ...", in order to provide clarity and consistency:

and any resulting discharge or deposition of bed material,

(c) Insert in notified Rules 13.5.1.3 and 13.5.1.4 the following wording after "The disturbance or reclamation of, or the deposition of ...", in order to provide more clarity and certainty:

and any resulting discharge of bed material,

(d) Adopt the generic permitted activity condition relating to the time requirement for undertaking and completing works and which applies to notified Rules 13.5.1.1 to 13.5.1.4.

(e) Re-instate the "250 metres downstream" permitted activity condition to notified Rules 13.5.1.1, 13.5.1.2, 13.5.1.3 and 13.5.1.4, in order to provide greater flexibility:

(x) All reasonable steps ... beyond a distance of ~~250~~ ~~100~~ 250 metres downstream of the activity; and

4.2.2 Reasons

- **Remobilisation and redeposition of bed material**

Amending the notified note box providing a definition for alteration gives certainty by clarifying the activity status of rules under Sections 13 and 15 RMA so the permitted activities can be understood, applied consistently, and enforced.

Adding a new rule to the start of section 13.5 and amending Rules 13.5.1.1 to 13.5.1.5, 13.5.1.9 and 13.5.1.5B clarifies that the provisions in section 13.5 address all matters relating to the disturbance, reclamation, deposition and any resulting discharge of bed material.

- **Limiting duration of discolouration**

The removal of "consecutive" in the notified rule conditions requiring completion of work within 10 hours and the addition of "within the wetted bed" provides more flexibility than is in the current operative Water Plan. The non-consecutive 10 hour requirement relates only to work within the wetted bed and does not cover the time taken to prepare or undertake work on the bed or banks where they are dry. There is a consent pathway for those who are unable to complete work in wetted bed areas within this period.

- **Limiting downstream effects of discolouration**

The distance within which significant changes in the colour or visual clarity of the receiving water caused by instream works or activities are allowed can be relaxed. The 100 m distance standard as proposed in the notified rules may be overly restrictive in swift rivers, which are often naturally characterised by high levels of sediment transport. Furthermore, there is no known instance where the 250 m standard in the operative Plan has caused any significant issue for water quality immediately beyond the zone of disturbance.

4.3 Livestock disturbance

The notified plan change proposed new rules relating to the disturbance the bed of any lake, river or Regionally Significant Wetland by livestock. It notably prohibited intentional driving of stock on the bed of lakes, rivers or Regionally Significant Wetlands.

We considered the submissions relating to livestock disturbance and recommend that the rules be clarified, and that a consent option be made available for intentional driving of livestock on the bed of a lake, river or Regionally Significant Wetland.

4.3.1 Recommendations

(a) Amend notified Rule 13.5.1.8A, in order to provide more certainty and clarity:

13.5.1.8A The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a ***permitted*** activity, providing it does not:

(a) Involve feeding out; or

(b) Cause or induce noticeable slumping, pugging or erosion; or

~~(b) Expose soil; or~~

~~(c) Involve feeding out; or~~

(~~d~~c) ~~Increase the colour or reduce the~~ Result in a visual change in colour or clarity of water; or

(~~e~~d) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

(b) Delete the note box below notified Rule 13.5.1.8A:

~~Note: This rule does not authorise any discharge to water or discharge to land in circumstances where contaminants may enter water. Sections 15(1)(a) and 15(1)(b) of the Act apply.~~

(c) Delete notified section 13.5A and amend notified Rule13.5.1.8B, in order to clarify the rules for bed disturbance where livestock is being intentionally driven across the bed of a lake, river, or Regionally Significant Wetland:

~~**13.5A Entering onto or passing across the bed of a lake or river, or a Regionally Significant Wetland**~~

~~**13.5A.0 Prohibited activities: No resource consent will be granted**~~

~~13.5A.0.1 The entering onto or passing across the bed of any lake or river, or any Regionally Significant Wetland by livestock, for the purpose of moving livestock from one location to another:~~

~~(a) Excluding the use of any authorised structure over water and the bed of any lake or river, or any Regionally Significant Wetland; and~~

~~(b) Excluding seasonal muster.~~

~~Is a **prohibited** activity.~~

13.5.1.8B The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, by livestock where they are being intentionally driven ~~due to seasonal muster~~, and any resulting discharge or deposition of bed material, is a ***permitted*** activity, providing there is no: ~~it does not cause or induce slumping, pugging or erosion.~~

	(a) Existing structure available for use, and there is no suitable site for the erection or placement of a structure, to avoid bed disturbance; or (b) Visual change in colour or clarity of water, after the disturbance ceases; or (c) Noticeable slumping, pugging or erosion.

(d) Amend Rule 13.5.3.2, in order to clarify the activity status for livestock crossing Regionally Significant Wetlands:

13.5.3.2	Unless covered by Rules 13.5.1.1, 13.5.1.3, 13.5.1.5A, 13.5.1.8A, 13.5.1.8B or 13.5.2.1, the alteration of any Regionally Significant Wetland, is a ***discretionary*** activity.

(e) Amend the Principal reasons for adopting under section 13.5.3, in order to remove the references to provisions that are recommended to be deleted:

Principal reasons for adopting

The alteration of the bed of a lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

No person may disturb, remove, damage, or destroy any plant or part of any plant (whether exotic or indigenous) or the habitats of any such plants or of animals in, on, or under the bed of any lake or river in a manner that contravenes a rule in a regional plan or proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use allowed by Section 20A of the Act (Resource Management Act Section 13(2)(b)).

~~In relation to Rule 13.5.1.8, Conditions (a) to (d) of the rule address Section 13(1) of the Resource Management Act and Conditions (d) and (e) address Section 13(2)(b) of the Resource Management Act.~~ Rules 13.5.2.1 and 13.5.3.1 provide for the preservation of the natural state of the shoreline of Lake Wanaka, consistent with Section 4(c) of the Lake Wanaka Preservation Act 1973. …

4.3.2 Reasons

- **Animal waste entering water**

Providing for discharge and deposition directly associated with livestock disturbance in notified Rules 13.5.1.8A and 13.5.1.8B and removing the note box below Rule 13.5.1.8A gives more certainty by clarifying the activity status of rules.

- **Replacing "increase or reduce" with "visual change" in water**

Replacing the word "conspicuous" and amending notified Rule 13.5.1.8A to "visual change" in relation to clarity or colour effectively aligns the livestock disturbance

rules with recommended amendments to notified Rule 12.C.1.2 regarding sediment. The use of the narrative qualifier "visual" as opposed to numerical qualifiers allows for on-the-spot assessment with no need for the use of technical instruments or measuring tools.

- **Intentional driving of stock and random stock access to lakes, rivers and Regionally Significant Wetlands**

Amendments to notified Rules 13.5.1.8A and 13.5.1.8B clearly distinguish intentional movement of livestock from roaming stock, and avoid any conflict between rules.

These recommended changes also ensure greater consistency between the permitted activity conditions of notified Rules 13.5.1.8A and 13.5.1.8B and better alignment with the proposed standard for sediment discharges included in section in 12.C.

- **Stock access to lakes, rivers and Regionally Significant Wetlands**

The deletion of notified Rule 13.5A.0 and subsequent amendments to notified Rules 13.5.1.8A and 13.5.1.8B clarify the original intent of the rules, which was to avoid frequent stock crossings through water bodies while still allowing stock access to, and through, water infrequently. The reference to "seasonal muster" is removed as it was seen as uncertain. The amendments to the conditions of the permitted activity rules are considered sufficient to control effects on in-stream values that are more than minor and minimise risk of damage to the beds of lakes, rivers and Regionally Significant Wetlands.

Rule 13.5.1.8A still allows for some light grazing of riparian margins as a means of weed control as long as the rule conditions are met. The requirement to meet all conditions in the rule in order to be allowed stock access to the bed of a lake or river still places a high expectation on landholders to protect water quality by managing stock access.

- **Fencing**

There is no rule explicitly requiring the fencing of lake or river beds due to the practicality and effectiveness of a single approach for all situations. However, in areas where the permitted activity conditions in livestock bed disturbance rules are difficult to meet and the installation of a crossing and/or fencing is possible, landholders are encouraged to consider these as measures to achieve compliance. A consenting option is available for situations where the conditions cannot be met.

- **Principal reasons for adopting**

The principal reasons for adopting are amended as Rule 13.5.1.8 is being deleted.

CHAPTER 5 – RECOMMENDATIONS ON OTHER PLAN CHANGE MATTERS

5.1 Providing for capture of contaminated water

To meet the notified contaminant discharge limits in Schedule 16, some people will need to contain and treat discharges. "Capture dams" are one method of doing this.

We considered the submissions presented on "capture dams" and are of the opinion that no change is needed. The reuse of capture dam water is already adequately provided for in the Water Plan.

5.1.1 Recommendations

(a) Make no amendment to the plan change to address "capture dams".

5.1.2 Reasons

The installation and use of capture dams comprise several activities: the building of the structure, the damming of water, the take of water and the discharge of water or contaminant to water, or to land in circumstances which may result in that contaminant entering water.

- **The building of the dam**

The building of a dam outside of the bed of a lake or river is not controlled by the Water Plan. It can be carried out as-of-right if consistent with the provisions on structures in district plans and the Building Act 2004.

Rule 13.2.1.3 of the Water Plan permits the erection of small dams in or on the bed of lakes and rivers. The erection of larger dams on the bed of a lake or a river is discretionary.

The erection of any dam in the Waitaki catchment needs a consent, as required by the Waitaki Catchment Water Allocation Regional Plan.

- **The damming of water**

Rule 12.3.2.1 of the Water Plan permits small scale damming of water where the upstream catchment is less than 50 hectare, the reservoir is less than 3 metres deep and 20,000 cubic metres in volume. Restrictions on the damming of water in the Water Plan do not apply to water that has lawfully been taken for use, and is still under the authorisation for that use.

The damming of water in the Waitaki catchment needs a consent, as required by the Waitaki Catchment Water Allocation Regional Plan.

The authorisation for any diversion of water that occurs along with the damming activity is also under Rule 12.3.2.1.

- **The taking of water**

The taking of water from an "artificial lake" resulting from the damming of water is a permitted activity, providing that damming meets the conditions of Rule 12.3.2.1, and the take is authorised by the owner of the dam.

Section 12.1.2 of the Water Plan permits other taking of water, with restrictions on the volume taken. The taking or diversion of water for the purpose of land drainage is permitted without volume restriction (Rules 12.1.2.6 and 12.3.2.2).

Any other taking of water needs a consent. The taking of water from a lake, when the water has been delivered to this lake for the purpose of this taking, is a controlled activity. All consents are granted with conditions controlling the quantity that can be sustainably taken.

- **Discharges of water or contaminant from a dam**

Discharges from a capture dam are recommended if the discharge does not enter a lake, river, wetland, or a drain or race flowing to a lake, river or wetland. If the discharge enters such water, then the discharge must meet the conditions of amended Rule 12.C.1.1 to be permitted. Where a water body is artificial and specifically provided as part of a contaminant discharge treatment system, e.g. it is a sediment settling pond or a polishing wetland, it is the discharge from the system that is required to meet that rule when it enters the water specified in the rule.

Discharges of contaminants to land are permitted, unless the discharge is from an industrial or trade premises, or is discretionary under the Waste Plan.

5.2 Simplification and streamlining

The notified plan change removed the introduction, issues, explanations, principal reasons for adopting, cross-referencing, anticipated environmental results and some methods and information requirements in those parts of the Water Plan affected by this plan change. This was been done to streamline the Plan in line with the amended RMA (2005).

Submitters raised concerns regarding the removal of these provisions.

We considered the submissions and recommend a limited reinstatement of one method.

5.2.1 Recommendations

(a) Delete the introduction, issues, explanations, principal reasons for adopting, cross-referencing and anticipated environmental results, Method 15.5.1.2 and Information Requirement 16.3.3 as notified, in order to simplify the Water Plan.

(b) Reinstate an amended version of Method 15.5.1.1, in order to clarify the intent of the plan change:

~~15.5.1.1 The Otago Regional Council will encourage and assist agricultural, recreational and industry groups to prepare codes of practice and environmental management systems for various land use activities, in order to reduce adverse effects on water.~~

15.5.1.1 The Otago Regional Council ~~will~~ encourages and supports the development and use of ~~assist agricultural, recreational and industry groups to prepare~~ codes of practice and environmental management systems that ~~for various land use activities, in order to~~ reduce adverse effects on water resources.

5.2.2 Reasons

- **Consistency with the RMA Amendment Act 2005**

In August 2005, Section 67(1) RMA was amended to require a regional plan contain only objectives, policies and rules. Other provisions, such as issues and explanations, became optional under Section 67(2).

- **Creating a user-friendly plan**

It is easier to read and use the Water Plan if the regulatory and consent guiding provisions are self-explanatory.

- **Providing guidance through supporting information**

ORC will continue to produce a range of supporting documents, including the SOE reports, brochures and guidelines on using the Water Plan and website material.

Information requirements for consent applications can be found on ORC consent application forms.

- **Continuing cooperation with industry groups**

The reinstatement of amended Method 15.5.1.1 emphasises that ORC will continue to work with industry groups and organisations on the development and use of codes of practice and environmental management systems that reduce adverse effects on water resources. Such interaction will encourage consistency between industry codes of practice and the water quality objectives promoted in the Water Plan.

5.3 Compliance, enforcement and education

ORC promotes continued monitoring and education to support the plan change to drive changes in land management practices which will maintain or improve water quality in Otago.

We considered the submissions received and recommend that an education and compliance strategy is described outside the Water Plan.

5.3.1 Recommendations

(a) Make no amendment to the plan change on matters of compliance, enforcement or education.

5.3.2 Reasons

- **Self monitoring**

There is no need to prescribe in a regulatory plan, how landholders or managers should monitor contaminant discharges to water from their land. Guidelines on procedures will be included in other, non-statutory documents, such as information brochures and guides. These will be distributed via the website, or by hard copy, and will be updated regularly without the need to go through the statutory plan change process. Real-time information on representative river flows will be made available on the Water Info website.

- **Catchment education**

ORC undertakes a range of catchment-based education programmes, aimed at assisting land managers to better understand the effects of their activities on water quality. The programmes include sharing information on sampling and monitoring practices, interpretation of data and guidance for land managers on changes that may be required on their properties. ORC also undertakes research and monitoring to identify the high-risk areas and activities in Otago, as well as the practices that help reduce adverse effects of land uses on water quality.

- **Compliance monitoring and enforcement**

ORC may undertake compliance monitoring at any time, and it is inappropriate to constrain its statutory responsibility in any way. Therefore the compliance and enforcement strategy is not set out within the Water Plan. The budget and targets for this function are set through the annual planning process under the Local Government Act 2002.

Those parts of the permitted activity Rules 12.C.1.1 (Schedule 16 contaminants) and 12.C.1.3 (nitrogen loading) which take effect from 2020 can only be enforced from that time. Until 2020, such monitoring may be used for education purposes, but not for compliance or enforcement purposes.

We recommend that ORC establish an oversight group. Compliance and enforcement activities undertaken are reported to ORC's Regulatory Committee and in the Annual Report.

5.4 Consent notification

The RMA Amendment Act 2009 repealed Sections 93 and 94(1) RMA relating to notification of a consent application and introduced Sections 95 and 95F. The plan change provided an opportunity to update those clauses.

Various submitters raised the concern that the notification clause proposed under the notified plan change would have an impact on participation in the consent decision-making process.

5.4.1 Recommendations

(a) Adopt the wording of the notification clause as included in notified Rules 12.C.2.1, 12.C.2.2 and 13.3.2.1.

(b) Make consequential amendments in order to include the notification provisions in new restricted discretionary activity Rules 12.C.2.1, 12.C.2.2 and 12.C.2.3 and amended Rules 13.1.2.1, 13.2.2.1 and 13.3.2.1.

5.4.2 Reasons

- **Coverage by the matters of discretion**

The notification clause attached to the restricted discretionary rules in sections 12.C, 13.1, 13.2 and 13.3 states that the consent authority is precluded from giving public notification of an application. It is appropriate for activities covered by these restricted discretionary rules to be considered without full public notification, because their effects are sufficiently covered through the amended matters of discretion. However, the notification clause attached to the restricted discretionary rules in sections 12.C, 13.1, 13.2 and 13.3 does not preclude limited notification. This will ensure that those directly affected by a proposal still have opportunity to have input to consent decision making processes.

- **Ability to notify where special circumstances exist or where activities may affect the wider public**

Regardless of the notification clause in the restricted discretionary rules, a consent authority may publicly notify an application under Section 95A(4) of the RMA, if it decided special circumstances exist in relation to the application.

Discharges that may have effects extending far beyond the immediate discharge area, such as discharges of water from one catchment to another or discharges that cause flooding or erosion, will be given discretionary activity status. For these discharges limited notification is not appropriate because there should be adequate opportunities for public input to assess broader environmental, social, cultural or economic impacts on the wider community. Therefore, the consent authority is not precluded from giving public notification for activities considered under the rules in section 12.C.3.

- **Consistency**

While amendments to RMA notification provisions made in 2009 do not affect an operative plan's non-notification and non-service clauses, the plan change provides an opportunity to amend the notification clause, in a manner that better reflects amendments to the RMA and provides for ongoing and consistent administration of the Plan.

5.5 Minor and consequential amendments

The plan change proposes a number of minor and consequential changes, including changes to the table of contents, page numbering, and headers and footers.

We considered the submissions and recommend that all minor and consequential amendments resulting from the recommendations set out in this report be made.

5.5.1 Recommendations

(a) Make any consequential amendments necessary in order to give effect to proposed or recommended changes.

(b) Amend the text in the note box at the bottom of the introduction in order to explain the relationship between Chapter 7 with other parts of the Water Plan and change the location of the text:

~~Note: The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes, and rivers and wetlands.~~

The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes, and rivers and wetlands; and those included in Chapter 9, which contain policies on groundwater quality.

5.5.2 Reasons

- **Minor change to the note box at the start of Chapter 7**

Stating the interconnection between the chapters of the Water Plan as the introduction will make these connections more obvious to plan users.

- **Other minor and consequential amendments**

Clause 10(2) of Schedule 1 RMA provides for any necessary consequential alterations.

CHAPTER 6 – MATTERS NOT ADDRESSED IN THIS PLAN CHANGE

6.1 Beyond the scope of the plan change

Matters that were raised during the submissions and hearing process and that are considered beyond the scope of Plan Change 6A include requests relating to policies and rules for discharges that were not notified in the original plan change.

We considered the submissions and recommend amending the notified rules 12.B.1.1 and 12.B.1.4 to update the existing references to certificates for the handling and use of agrichemicals.

6.1.1 Recommendations

(a) Amend Rules 12.B.1.1 and 12.B.1.4 as discussed in Section 3.10 of this report.

(b) Make no amendment to address matters beyond the scope of this plan change

6.1.2 Reasons

- **Section 7.C policies and rules in section 12.B**

Policies in section 7.C have been renumbered and repositioned but are otherwise unchanged. Most rules in section 12 B remain unchanged.

Rules 12.B.1.1 and 12.B.1.4 have references updated to ensure that all individuals and organisations involved in the discharge of herbicides to water and aerial application of herbicides onto land are operating to best practice in terms of both flight and environmental safety.

- **Better protection for wetlands**

The notified plan change intended to manage the adverse effects from discharges considered under Section 12.C by extending the scope of the rule framework to all water, including water in wetlands. The amended rules in section 12.C continue to protect wetlands against the adverse effects from these discharges.

While the amended rule framework in section 12.C applies to all wetlands, Chapter 13 rules only apply to Regionally Significant Wetlands.

Amending the rules in Chapter 13 to extent their scope to all wetlands would require a variation to the plan change, or a new plan change, to ensure persons potentially affected by these matters are consulted, notified and heard.

Note that Plan Change 2: Regionally Significant Wetlands addresses some matters raised by submitters.

33) with the Environment Court within 15 working days after this notice was lodged with the Environment Court.

You may apply to the Environment Court under section 281 of the Resource Management Act 1991 for a waiver of the above timing requirements (*see* form 38).

How to obtain copies of documents relating to appeal

The copy of this notice served on you does not attach a copy of the appellant's submission or the decision (*or* part of the decision) appealed. These documents may be obtained, on request, from the appellant.

The copy of this notice served on you does not attach a copy of any other documents necessary for the adequate understanding of the appeal (of which there were none), or a list of names and addresses of persons to be served with a copy of this notice. These documents may be obtained, on request, from the appellant.

Advice

If you have any questions about this notice, contact the Environment Court Unit of the Department for Courts in Auckland, Wellington or Christchurch.

Contact details of Environment Court for lodging documents

Documents may be lodged with the Environment Court by lodging them with the Registrar.

The Christchurch address of the Environment Court is:
99 – 101 Cambridge Terrace
CHRISTCHURCH 8013

Its postal address is:
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APPENDIX 1

Proposed Plan Change 6A (Water Quality)

Regional Plan: Water for Otago

Incorporating Council Decisions

Note: All amendments to text in this Plan resulting from Proposed Plan Change 6A (Water Quality) as notified, and incorporating Council Decisions, are shown with additions underlined and deletions ~~struckout.~~

Proposed Plan Change 2 (Regionally Significant Wetlands) text is shown in this document in blue italics.

Otago Regional Council

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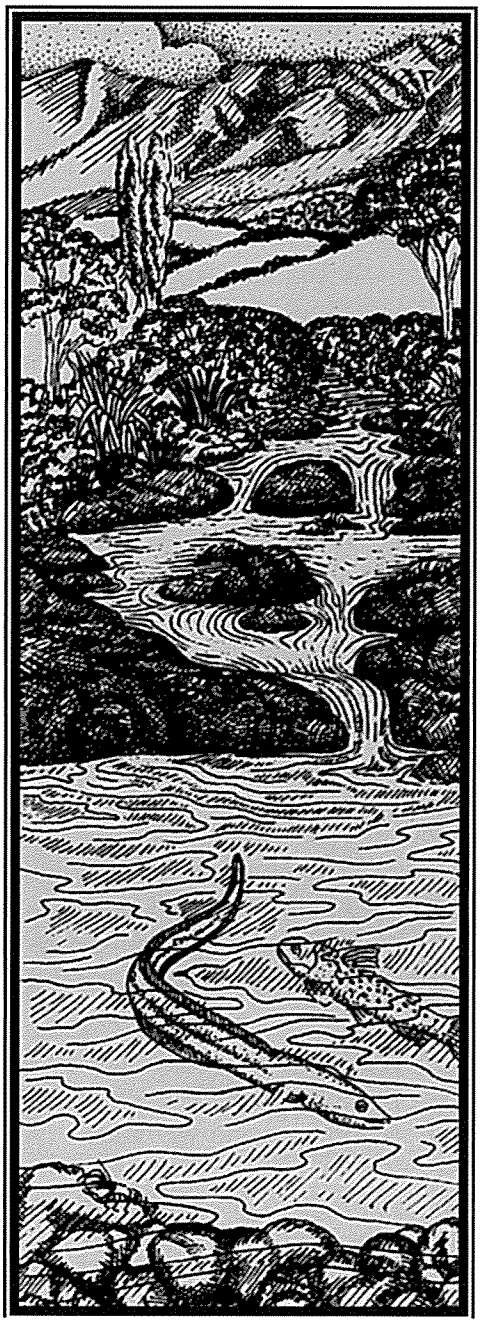
Water Quality



~~7.1 Introduction~~

~~The well-being, health and safety of Otago's communities depends to a large degree on the quality of water in the region's lakes, and rivers and wetlands. Otago generally enjoys high quality water which provides opportunities for varied community use, including recreation, domestic and public water supply and irrigation. It also sustains indigenous flora and fauna, trout and salmon, and contributes to the amenity values and natural character of Otago's lakes, and rivers and wetlands.~~

~~Water quality can be adversely affected by discharges of contaminants and disturbance of the beds of rivers and lakes resulting from human activities. There are two main types of discharges that can affect water quality. These discharges are generally called "point source", those that occur at a definable place, often through a pipe or drain, and "non-point source", those that enter a water body from a diffuse source, such as land runoff or infiltration. Where water quality is adversely affected by these discharges and bed disturbance, they will, in turn, reduce the ability of lakes and rivers to support Otago's people and communities, and aquatic life is reduced. There is a particular concern in relation to discharges of human sewage to water which Kai Tahu find culturally offensive.~~

~~Policy 6.5.5 of the Regional Policy Statement for Otago promotes a reduction in the adverse effects of contaminant discharges to Otago's water bodies. Existing water quality is to be maintained and, where appropriate, is to be enhanced to support aquatic life, and contact recreation. This chapter seeks to achieve this through the management of point source and non-point source discharges. The management of discharges by resource users is also promoted where that can be effective.~~

~~This chapter provides for management of discharges that may adversely affect water quality. It is recognised that water quality can be adversely affected by the taking of water, in that such takes may reduce the capacity of a lake or river to assimilate contaminants. Adverse effects due to a contaminant discharge should be mitigated in the first instance by reducing the level of contaminant being discharged, rather than increasing the assimilative capacity of the water body.~~

~~The city and district councils of Otago have an essential role in achieving water quality objectives, particularly through their management of the effects of land use, in relation to non-point source discharges. The objectives and policies of this Plan will provide the necessary direction for that.~~

~~**Note:** The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes, and rivers and wetlands.~~

The provisions in this chapter are in addition to those in Chapter 5, which seek to maintain or enhance the natural and human use values supported by lakes, and rivers and wetlands; and those included in Chapter 9, which contain policies on groundwater quality.

~~7.2 Issues in general~~

~~7.2.1 Discharges of contaminants, on their own or cumulatively, can adversely affect the life-supporting capacity and people's use of Otago's lakes and rivers.~~

~~Explanation~~

~~The discharge of contaminants may exceed a water body's capacity to absorb or assimilate them. This can result in any of the following changes to water quality:~~

~~(a) Increased sediment loads;~~
~~(b) The presence of floatables (grease, fat, solids etc);~~
~~(c) Offensive odours;~~
~~(d) Increased BOD_5;~~
~~(e) Increased nutrient levels;~~
~~(f) Decreased oxygen concentrations;~~
~~(g) Increased pathogenic contamination;~~
~~(h) Increased levels of toxic substances.~~

~~Such changes can reduce the ability of water bodies to support people's use of water and the plants and animals that live in that water. Given the importance of water use to people and the intrinsic value of aquatic life, such reductions in water quality are of concern.~~

~~*Objectives: 7.5.1*~~
~~*Policies: 7.7.1 to 7.7.11, 7.8.1 to 7.8.6, 8.8.2*~~

~~7.2.2 In some Otago lakes and rivers, discharges of contaminants have resulted in water quality degradation so that their ability to support aquatic life or contact recreation is compromised.~~

~~Explanation~~

~~The point source or non-point source discharge of contaminants has already adversely affected the water quality in some of Otago's lakes and rivers. This has reduced the ability of these water bodies to support contact recreation, or plants and animals that live in that water. Such degraded water quality is of concern to Otago's communities and visitors.~~

~~*Objectives: 7.5.1*~~
~~*Policies: 7.6.1 to 7.6.3, 7.7.3, 7.7.11*~~

~~7.3 Issues related to point source discharges to water~~

~~7.3.1 Inappropriately large mixing zones for the discharge of contaminants can compromise the natural and human use values supported by water bodies for considerable distances downstream.~~

~~Explanation~~

~~Discharges of contaminants authorised under resource consents must meet any specified water quality standard set in respect of receiving waters after reasonable mixing. Reasonable mixing occurs in a mixing zone, which can be regarded as an accepted area of non-compliance. Beyond the mixing zone, there should be no adverse effects on the natural and human use values supported by the water body.~~

~~Where the size of mixing zones is inappropriate , the effect of the contaminant extends over a wider area of the water body. The treatment of contaminants prior to discharge can enable a reduction in the extent of a mixing zone. What is acceptable as a mixing zone in one water body may not be acceptable in others, due to differences in the sensitivity of supported values, the physical nature of the natural processes, and the nature of the discharge. All of these factors need to be considered in the determination of reasonable mixing.~~

~~Objectives: 7.5.1~~
~~Policies: 7.7.6~~

~~7.3.2 Some point source discharges, including those that are subject to a resource consent, can have unforeseen adverse effects on water quality.~~

~~Explanation~~

~~When resource consents are granted allowing discharges of contaminants to water, conditions are included with the intention that, if they are complied with, the natural and human use values supported by the receiving water body would not be adversely affected. In some cases, the values of a water body are adversely affected by the discharge, even though the resource consent conditions are being complied with. Where this occurs, it may be necessary to review the conditions of the resource consent.~~

~~Objectives: 7.5.1~~
~~Policies: 7.7.8, 7.7.9~~

~~7.3.3 Stormwater discharges are unavoidable, but may contain contaminants that have the potential to degrade water quality.~~

~~Explanation~~

~~Stormwater is the water that runs off any impervious surface. In urban or industrial areas, stormwater is commonly collected, reticulated and discharged to water. The water can pick up contaminants prior to collection, as it runs over land. These contaminants may be derived from a number of sources, including:~~

(a) Oil residues and other contaminants from roads and carparks;
(b) Accidental spills;
(c) Contaminated land; and
(d) Litter.

Once stormwater reaches a reticulation system, it can become contaminated through:
(a) Sewerage and stormwater systems not being effectively separated; or
(b) Inappropriate disposal of material to the system.

There are a number of techniques used to improve the condition of stormwater prior to its discharge.

Objectives: 7.5.1
Policies: 7.7.4, 7.7.10, 7.7.11

7.3.4 Contaminants are not always discharged to the most appropriate receiving environment.

Explanation
Receiving environments need to be able to assimilate, treat, or absorb the contaminants discharged to them. In the past, water has been used as the most common medium for the disposal of contaminants, although soil is increasingly being seen as an alternative receiving environment. There is a risk of contamination where the discharge exceeds the capacity of the water or land to contain it. Where soil's capacity to assimilate the contaminants is exceeded, subsequent contamination of water may occur through runoff and infiltration.

Objectives: 7.5.1, 7.7.5
Policies: 7.7.1 to 7.7.4

7.4 Issues related to non-point source discharges to water

7.4.1 Water can become contaminated as a result of land use activities which:

(a) Result in discharges of effluent, nutrients or other contaminants;
(b) Could potentially result in accidental spills of contaminants; and
(c) Disturb or generate sediment.

Explanation
The contaminants generated by, or used in conjunction with, land use activities may be carried to surface water bodies through runoff. The risk of contamination of surface water depends on the:
(a) Nature and intensity of the land use;
(b) Distance of the activity from a lake or river;
(c) Nature of the land between the activity and the water; and
(d) Degree to which the associated contaminants are contained.

~~It is more difficult to manage non-point source contamination, including accidental spills, compared to point source contamination, due to its diffuse or random nature. Non-point source discharges can, however, undermine all efforts previously made to maintain or enhance water quality.~~

~~*Objectives: 7.5.1*~~
~~*Policies: 7.8.1 to 7.8.4*~~

~~**7.4.2 The erection of a dam for the storage of contaminants can result in the loss or damage to:**~~

(a) The health and safety of people and communities;
~~**(b) Property and infrastructure;**~~
~~**(c) The natural and human use values identified in Schedule 1 supported by any water body affected;**~~
~~**(d) The natural character of any water body affected; and**~~
~~**(e) The amenity values supported by any water body affected,**~~
~~**should the dam fail or be overtopped.**~~

~~**Explanation**~~
~~Dams may be used to hold quantities of contaminants such as mining tailings, which can lead to degradation of water quality if there is an uncontrolled release. Such a release could occur through a failure of the structure, or an overtopping caused by, for example, a landslide into the reservoir. The adverse effects may include contamination of water, or loss of values supported by affected water bodies. The scale of the risk of damage depends on the size of the dam structure, the volume and nature of contaminants stored, and topography.~~

~~*Objectives: 7.5.1*~~
~~*Policies: 7.8.6*~~

~~**7.4.3 Water can be contaminated where contaminated land:**~~

~~**(a) Is flooded by an impoundment of water; or**~~
~~**(b) Has water diverted over or through it.**~~

~~**Explanation**~~
~~There is the potential for adverse effects on surface and groundwater quality where land, contaminated by a hazardous substance, is in contact with water. Damming or diverting water can lead to such direct contact.~~

~~*Objectives: 7.5.1, 9.3.3*~~
~~*Policies: 7.8.5, 9.4.18 to 9.4.21*~~

7.~~5~~A Objectives

~~**7.5.1 To maintain or enhance the quality of water in Otago's lakes and rivers so that it is suitable to support their natural and human use values and people's use of water.**~~

~~**Explanation**~~

~~Otago's lakes and rivers contain a diverse range of natural and human use values and are extensively used by people and the community. The existing water quality in most of the region's lakes and rivers is sufficient to support these values. It is therefore important that no degradation is allowed to occur. This is consistent with Policy 6.5.5 of the Regional Policy Statement for Otago which requires that existing water quality be used as the minimum acceptable standard. This policy also identifies the circumstances in which enhancement of water quality will be sought so that it is suitable for contact recreation and aquatic life. Policies 7.6.1, 7.6.2 and 7.6.3 of this Plan identify those water bodies which are considered to be degraded in this context.~~

~~**Principal reasons for adopting**~~

~~This objective is adopted to ensure that the uses and values of Otago's lakes and rivers that are significant to the region's people and communities, or are important due to their intrinsic value, can continue to be used, enjoyed or appreciated. This reflects the community's expectation that water quality within Otago should support these uses and values.~~

~~*Policies: 7.6.1 to 7.6.3, 7.7.1 to 7.7.11, 7.8.1 to 7.8.6*~~
~~*See also: 8.6.1, 8.6.2, 8.7.1, 8.8.1, 8.8.2*~~

7.A.1 To maintain water quality in Otago lakes, rivers, wetlands, and groundwater, but enhance water quality where it is degraded.

7.A.2 To enable the discharge of water or contaminants to water or land, in a way that maintains water quality and supports natural and human use values.

7.A.3 To have individuals and communities manage the effects, including cumulative effects, of their activities on water quality.

7.B Policies general

7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by:

(a) Recognising the differences in the effects and management of point and non-point source discharges; and
(b) Defining, in Schedule 15, characteristics and standards that describe good quality water; and
(c) Maintaining, from the dates specified in Schedule 15, good quality water; and
(d) Enhancing water quality where it does not meet Schedule 15 standards; and
(e) Recognising discharge effects on groundwater.

7.B.2 Avoid objectionable discharges of water or contaminants that degrade the natural and human use values of Otago lakes, rivers, wetlands and groundwater.

7.B.3 Allow discharges of water or contaminants to Otago lakes, rivers, wetlands and groundwater that have minor effects or are short-term.

7.B.4 *[Moved from 7.7.2]* **When considering ~~the~~ any discharge of water or ~~any~~ contaminants to land, ~~to~~ have regard to:**

(a) The ability of the land to assimilate the water or contaminants; and
(b) Any potential ~~for~~ soil contamination; and
(c) Any potential ~~for~~ land instability; and
(d) Any potential adverse effects on water quality.

7.B.5 When considering any discharge of water from one catchment to water in another catchment, have regard to:

(a) Tangata whenua values; and
(b) The adverse effects of introducing species that are new to the receiving catchment.

7.B.6 *[Moved from 7.7.8]* **~~To r~~Require, as appropriate, that any resource consent for discharging water or contaminants contains a review condition ~~provision be made for review of the conditions of any resource consent for discharging a contaminant~~.**

7.B.7 Encourage land management practices that reduce the adverse effects of water or contaminants discharged into water.

7.B.8 Encourage adaptive management and innovation that reduces the level of contaminants in discharges.

~~7.6 Policies for the enhancement of water quality~~

~~7.6.1 To enhance the water quality in the following water bodies so that they become suitable to support primary contact recreation:~~

~~(a) Mill Creek and Lake Hayes;~~
~~(b) Kaikorai Stream;~~
~~(c) Water of Leith;~~
~~(d) Lower Taieri River (below Allanton);~~
~~(e) Lower Silver Stream (below Riccarton Road);~~
~~(f) Koau Branch of the Clutha River/Mata-Au;~~
~~(g) Tokomairiro River;~~
~~(h) Lower Waiwera River (below SH 1);~~
~~(i) Heriot Burn; and~~
~~(j) Crookston Burn.~~

~~Explanation~~

~~The water bodies identified above meet one or more of the criteria for enhancement in Policy 6.5.5 of the Regional Policy Statement for Otago.~~

~~Otago Regional Council monitoring has shown that the identified water bodies all have median faecal coliform numbers exceeding the level recommended for primary contact recreation (200 CFU/100 ml – USEPA Criteria). Faecal coliforms are an indicator of the presence of disease-causing pathogens, associated with human or animal waste. The ability to safely undertake recreational activities in water is an appropriate indicator of the quality of water within Otago. High numbers of faecal coliforms prevent the safe contact with water in the water bodies identified above.~~

~~The enhancement of water quality to a standard suitable for contact recreation will be pursued through the management of point source and non-point source discharges, regardless of whether the water bodies are artificially augmented or not.~~

~~Principal reasons for adopting~~

~~This policy is adopted to implement Policy 6.5.5 of the Regional Policy Statement for Otago, which requires, where appropriate, the enhancement of Otago's water quality. This reflects the community expectation that water quality within Otago will continue to support natural and human use values. The successful implementation of this policy would provide the opportunity for safe contact recreation in the identified water bodies.~~

~~Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1~~

~~Other methods: 15.2.3.1, 15.2.5.1 to 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.5.1.2, 15.9.1.1, 15.9.1.2~~

~~7.6.2 To enhance the water quality in the following rivers so that the Macroinvertebrate Community Index score is increased:~~

~~(a) Hayes Creek;~~
~~(b) Lower Horne Creek (below gardens walkway);~~
~~(c) Lower Kaikorai Stream (below Townleys Road);~~
~~(d) Lower Taieri River (below Allanton);~~
~~(e) Lower Waipori River (below Lake Waipori);~~
~~(f) Lower Tokomairiro River (below Tokoiti);~~
~~(g) Lower Owaka River (below SH 92);~~
~~(h) Lower Waiareka Creek (below Elderslie Road, Round Hill);~~
~~(i) Lower Kaihiku Stream (below Clifton Road); and~~
~~(j) Lower Wairuna Stream (below Waipahi-Clydevale Road).~~

~~Explanation~~

~~The rivers identified above meet one or more of the criteria for enhancement in Policy 6.5.5 of the Regional Policy Statement for Otago.~~

~~The condition of aquatic habitat can be measured by the Macroinvertebrate Community Index (MCI) which is an indicator of the condition of benthic~~

~~(bottom-dwelling) invertebrate communities. The MCI is the most widely used and best-known index for New Zealand aquatic invertebrates, and is an appropriate indicator of the life-supporting capacity of rivers. Otago Regional Council monitoring has shown that the identified water bodies all have invertebrate communities which are not characterised by the diversity and composition which could be expected in like habitat types (see Appendix 1). This condition is thought to be at least partly related to poor water quality.~~

~~While this policy aims to increase MCI scores, other types of monitoring may also be used in the pursuit of enhancing water quality and habitat. The enhancement of water quality to a standard which supports a higher MCI score will be pursued through the management of point source and non-point source discharges. Appendix 1 identifies the MCI scores that will be sought for the water bodies identified in the policy.~~

~~**Principal reasons for adopting**~~

~~This policy is adopted to implement Policy 6.5.5 of the Regional Policy Statement for Otago, which requires, where appropriate, the enhancement of Otago's water quality. This reflects the community expectation that water quality within Otago will continue to support natural and human use values. The successful implementation of this policy would reflect improved habitat quality in the identified rivers.~~

~~*Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1*~~

~~*Other methods: 15.2.3.1, 15.2.5.1 to 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.5.1.2, 15.9.1.1, 15.9.1.2*~~

~~**7.6.3 To enhance the water quality in the following lakes so that the aquatic ecosystem is enhanced:**~~

~~**(a) Lake Hayes;**~~
~~**(b) Lake Johnson;**~~
~~**(c) Lake Tuakitoto;**~~
~~**(d) Lake Waipori; and**~~
~~**(e) Lake Waihola.**~~

~~**Explanation**~~

~~The lakes identified above meet one or more of the criteria for enhancement in Policy 6.5.5 of the Regional Policy Statement for Otago.~~

~~Otago Regional Council monitoring has shown that the identified water bodies all have had nitrogen and phosphorus loadings exceeding that recommended (0.5 gN/m^3 and 0.05 gP/m^3 respectively ANZECC Guidelines) as being suitable for aquatic ecosystems.~~

~~The enhancement of water quality to a standard which supports an enhanced aquatic ecosystem will be pursued through the management of point source and non-point source discharges.~~

Principal reasons for adopting

This policy is adopted to implement Policy 6.5.5 of the Regional Policy Statement for Otago, which requires, where appropriate, the enhancement of Otago's water quality. This reflects the community expectation that water quality within Otago will continue to support natural and human use values.

Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1

Other methods:15.2.3.1, 15.2.5.1 to 15.2.7.1, 15.2.8.1 to 15.2.8.3, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.5.1.2, 15.9.1.1, 15.9.1.2

7.6.4 When considering any application for a discharge the Council will have regard to the following matters:

(a) The extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and

(b) The extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

This policy applies to the following discharges (including a diffuse discharge by any person or animal):

(a) A new discharge or

(b) A change or increase in any discharge –

of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.

7.7 Policies for point source discharges

7.C Policies for discharges of human sewage, hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams

~~7.7.1~~ ~~**To promote discharges of contaminants to land in preference to water, where appropriate.**~~

~~**Explanation**~~
~~The Otago Regional Council's preference for the discharge of contaminants to the environment is that they be discharged to land, including constructed wetlands, as opposed to water. It is recognised that the discharge of organic materials may benefit soil health. Some discharges to land, however, may still contaminate water resources, through runoff to surface waters, or through leaching to groundwater, or have adverse effects on soil. Such effects are addressed in Policy 7.7.2. The Regional Council may not promote discharges of contaminants to land in circumstances where those adverse effects could occur.~~

~~In any case involving the discharge of contaminants to land or to water, the requirements of this Plan will apply in managing their effects on the environment.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to avoid the adverse effects of discharges to water by promoting land disposal as a suitable alternative to such discharges in appropriate circumstances. This is particularly important to Kai Tahu, who find the discharge of human sewage to water culturally offensive.~~

~~*Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1*~~

~~7.7.2~~ *[Policy moved to 7.B.4]* ~~**When considering the discharge of any contaminant to land, to have regard to:**~~

~~**(a) The ability of the land to assimilate the contaminant;**~~
~~**(b) Any potential for soil contamination; and**~~
~~**(c) Any potential for land instability.**~~

~~**Explanation**~~
~~While the discharge of contaminants to land is often preferable to the direct discharge to water, the ability of the land to assimilate the discharge without adverse effects has its limits. Where those limits may be exceeded, there is a need to consider potential adverse effects on water quality, soil, and land stability. Subsequent policies in this section address the effects of these discharges on lakes and rivers. Discharges to land may also result in contaminants leaching to groundwater. Policy 9.4.18 addresses the management of land associated with groundwater protection. Policies in Chapter 10 address any adverse effects of discharges on wetlands.~~

~~The land resource can also be adversely affected by discharges:~~

~~(i) Where the presence of particular substances in the discharge can result in soil contamination; or~~
~~(ii) Where land becomes physically unstable and prone to slippage due to excessive ground moisture.~~

~~In the consideration of resource consents for the discharge of contaminants to land regard will be had to matters (a) to (e) of the policy.~~

~~In assessing activities regarding (b) and (c) of this policy, regard may be had to guidelines produced by the Department of Health and industry groups, as appropriate.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to ensure that any adverse effects from the discharge of contaminants to land are considered in relation to the effects of the same discharge to water.~~

~~*Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1*~~
~~*Other methods:15.5.1.1, 15.5.1.2*~~

7.7.3 to 7.7.4 *[no change]*

~~**7.7.5 When considering applications for resource consents, to have regard to the cumulative effects of discharges of contaminants and the assimilative capacity of the water body.**~~

~~**Explanation**~~
~~Discharges of contaminants from all sources can exceed the capacity of the receiving water body to assimilate them. The opportunity to manage the cumulative effect of discharges will arise when considering applications for resource consents.~~

~~The taking of water can also influence the effect of discharges on a water body, by reducing the quantity of water available to assimilate contaminants. Although effects of takes on water quality are not considered to be an issue in terms of the Plan's scheduled minimum flows, consents considered under Policy 6.4.4, 6.4.6, 6.4.7 or 6.4.9(b) would need to have regard to any cumulative effects on assimilative capacity.~~

~~Regard will have to be had to existing discharges to the proposed receiving waters and the adverse effects they are having. Water quality monitoring will be critical in establishing the cumulative effects of discharges.~~

~~**Principal reasons for adopting**~~
~~This policy is adopted to ensure that the cumulative effects of discharges, the assimilative capacity of the water body and the effects of any takes of water considered under Policy 6.4.4, 6.4.6, 6.4.7 or 6.4.9(b), will all be considered when assessing applications for resource consents.~~

~~*Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1*~~

7.7.6 to 7.7.7 *[no change]*

~~**7.7.8**~~ *[Policy moved to 7.B.6]* ~~**To require, as appropriate, that provision be made for review of the conditions of any resource consent for discharging a contaminant.**~~

~~**Explanation**~~

~~Except as provided for by Policy 7.7.9(b) and (c), resource consents to discharge contaminants are issued with the expectation that the natural and human use values of the receiving water body will be maintained or enhanced. There are occasions however, where a consented discharge has unforeseen effects on water quality. In circumstances where the potential for an adverse effect is greatest, particularly due to the nature of the material discharged, review of the resource consent conditions may become necessary. Reviews of this nature are provided for by Section 128(1)(a)(i) of the Resource Management Act. To enable this review, a condition will be included, as appropriate, on any resource consent to discharge contaminants to water or land.~~

~~**Principal reasons for adopting**~~

~~This policy is adopted to provide an opportunity to review the conditions of resource consents within their duration, to address any unforeseen adverse effects on water quality resulting from the exercise of the resource consent. Such adverse effects may result from environmental or community change over time. Where a resource consent has been issued for a long term, it may be unacceptable to wait for the end of its duration to deal with any problem that has arisen.~~

~~*Rules: 12.4.2.1, 12.5.2.1, 12.6.2.1, 12.7.2.1, 12.8.2.1, 12.8.3.1, 12.9.2.1, 12.10.2.1, 12.11.3.1, 12.13.1.1*~~

7.7.9 to 7.7.11 *[no change]*

~~7.8 Policies for non-point source discharges~~

~~**7.8.1 To promote the avoidance, remediation or mitigation of the adverse effects of the increased runoff of nutrients and sediments caused by:**~~

~~**(a) Agricultural land uses;**~~
~~**(b) Urban development;**~~
~~**(c) Forest harvesting and site preparation;**~~
~~**(d) Roading and tracking ; and**~~
~~**(e) Any other activity that may generate increased runoff of sediment or nutrients.**~~

~~**Explanation**~~

~~Non-point source discharges are the cause of much of the contamination entering Otago's lakes and rivers.~~

~~The Otago Regional Council will inform those involved with the activities identified in the policy of the actions that can be undertaken to reduce the level of nutrients or sediment present in runoff. Actions that would be promoted would vary, depending on the nature and scale of the activity and the land concerned, but could include any of the following:~~

- ~~Facilitation of communication between interested groups;~~
- ~~Development of environmental farm plans, including the establishment of a nutrient budget, and the prevention of inappropriate stock access to water bodies;~~
- ~~Development of forest management plans;~~
- ~~Encouragement of self-monitoring programmes;~~
- ~~Riparian planting and management; and~~
- ~~Including relevant provisions in district plans, and relevant conditions on district council resource consents.~~

~~The Council also has a role in enforcing compliance with the duty of any person, under Section 17 of the RMA, to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person.~~

~~**Principal reasons for adopting**~~

~~This policy is adopted to recognise that the adverse effects of particular land use activities on water quality can be reduced by changing some management practices and implementing new ones. Education and promotion will be the most effective way of bringing about more desirable management practices.~~

~~*Other methods:15.2.3.1, 15.2.7.1, 15.4.2.1, 15.4.2.2, 15.5.1.1, 15.5.1.2*~~

7.8.2 to 7.8.6 *[no change]*

7.D Policies for discharges of water and contaminants, excluding those discharges provided for in 7.C

7.D.1 Encourage innovation in management practices and the sharing of information, including by:

(a) Council:

(i) Providing information on water quality and water quantity; and

(ii) Supporting landholders in measuring or assessing contaminants in discharges; and

(iii) Supporting the development of means to measure or assess contaminants in discharges.

(b) Landholders:

(i) Implementing practices that reduce the level of contaminants in discharges; and

(ii) Providing relevant information to support the catchment or aquifer studies undertaken by Council.

7.D.2 Schedule 16 discharge contaminant concentration limits apply, from 1 April 2020, at or below the reference flows set in Schedule 16B based on median flows.

7.D.3 Prohibit objectionable discharges of water or contaminants that degrade the natural and human use values of Otago lakes, rivers, wetlands and groundwater.

7.D.4 Provide for the consenting of any discharge under section 12.C:

(a) Where changes to land management practices or infrastructure have not been sufficient to meet permitted activity rules; or
(b) As part of the development of technology or innovative practices associated with improving water quality; or
(c) From a short-term activity with short-term adverse effects.

7.D.5 When considering any discharge under section 12.C, have regard to:

(a) The effects of the discharge on water quality, including cumulative effects; and
(b) A staged timeframe and management plan to achieve compliance with the permitted activity rules; and
(c) The extent to which the contaminants in the discharge result from the activities of the applicant; and
(d) The likelihood that the staged timeframe and management plan can be successfully applied; and
(e) The current state of technical knowledge.

7.D.6 When considering the duration of a resource consent under section 12.C, have regard to:

(a) The staged timeframe to achieve compliance with the permitted activity rules;
(b) The extent to which the contaminants in the discharge result from the activities of the applicant;
(c) Trends in the quality of the receiving water relative to the Schedule 15 standards;
(d) Any adverse effects of the discharge on the maintenance of natural and human use values;
(e) The extent to which the risk of potentially significant, adverse effects arising from the activity may be adequately managed through review conditions;
(f) The value of the investment in infrastructure; and
(g) The use of industry best practice.

7.D.7 The duration of a resource consent for a discharge, which breaches any relevant Schedule 16 or nitrogen leaching limit, will not exceed:
(1) Two years for discharges from a short-term activity with short-term adverse effects; or
(2) Five years for all other discharges where the contaminants in the discharge result from the activities of the applicant.

~~7.9 Anticipated environmental results~~

~~7.9.1 Water quality is enhanced so that it is suitable for contact recreation or aquatic life, where there is:~~

~~(a) A high public interest in, or use of the water; or~~
~~(b) A particular Kai Tahu interest in the water; or~~
~~(c) A particular value to be maintained or enhanced; or~~
~~(d) A direct discharge containing human sewage or wastes from commercial or industrial activities.~~

~~7.9.2 Existing water quality is maintained.~~

~~7.9.3 People and communities have access to suitable supplies of high quality water for their present and reasonably foreseeable needs.~~

~~7.9.4 Alternative receiving environments are adopted in preference to contaminants being discharged to water.~~

~~7.9.5 Appropriate receiving environments are utilised for any discharge of contaminants.~~

~~7.9.6 Land use practices that are sustainable in terms of water quality requirements are utilised.~~

~~7.9.7 Hazardous substances and other contaminants do not enter surface water bodies and adversely affect water quality.~~

~~7.9.8 There is no increase of sediment or nutrient loads in surface water bodies resulting from the use, development or protection of land.~~

~~7.9.9 Water quality is maintained or enhanced in order to support:~~

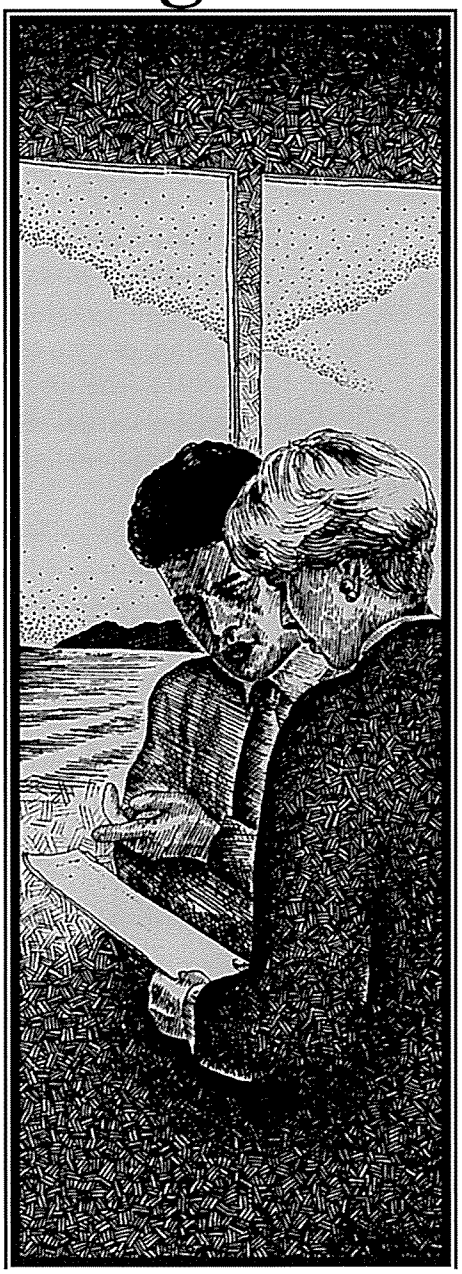
~~(i) Aquatic life fit for human consumption; and~~
~~(ii) Mauri of water and mahika kai values.~~

~~Note that anticipated environmental results 7.9.1 to 7.9.4 and 7.9.6 to 7.9.9 apply to water or water bodies other than those water bodies constructed to receive contaminants.~~

~~Monitoring of the achievement of these anticipated environmental results will be carried out as outlined in Chapter 19.~~

12

Rules: Water Take, Use and Management



12.0 Applications for taking water *[no change]*

12.1 The taking and use of surface water *[no change]*

12.2 The taking and use of groundwater *[no change]*

12.3 The damming or diversion of water *[no change]*

~~12.4 Discharge of stormwater~~

~~12.4.1 Permitted activities: No resource consent required~~

12.4.1.1 *[Rule moved to 12.B.1.8]*

12.4.1.2 *[Rule moved to 12.B.1.9]*

~~12.4.2 Restricted discretionary activities: Resource consent required~~

12.4.2.1 *[Rule moved to 12.B.3.1]*

~~**Principal reasons for adopting**~~

~~The discharge of stormwater to water can only occur if it is expressly allowed by a rule in a regional plan, or in any relevant proposed regional plan, or by a regulation, or by a resource consent (Section 15(1) of the Resource Management Act 1991). The discharge of stormwater to land (where it does not enter water) cannot be carried out in a manner that contravenes a rule in a regional plan or proposed regional plan (Section 15(2) of the Resource Management Act).~~

~~The discharge of stormwater under Rules 12.4.1.1 and 12.4.1.2 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable stormwater to be discharged while providing protection for those values and the interests of those people. Any other activity involving the discharge of stormwater is a restricted discretionary activity in order that any adverse effects can be assessed.~~

~~12.5 Discharge of drainage water~~

~~12.5.1 Permitted activities: No resource consent required~~

~~12.5.1.1 The discharge of drainage water to water, or onto or into land in circumstances where it may enter water, from any drain, is a ***permitted*** activity, providing:~~

~~(a) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and~~

~~(b) The discharge, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:~~

~~(i) The production of any conspicuous oil or grease films,~~

scums or foams, or floatable or suspended materials; or
(ii) Any conspicuous change in the colour or visual clarity; or
(iii) Any emission of objectionable odour; or
(iv) The rendering of fresh water unsuitable for consumption by farm animals; or
(v) Any significant adverse effects on aquatic life.

12.5.2 Restricted discretionary activities: Resource consent required

12.5.2.1 Except as provided for by Rule 12.5.1.1, the discharge of drainage water to water, or onto or into land in circumstances where it may enter water, is a ***restricted discretionary*** activity.

In considering any resource consent for the discharge of drainage water in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:
(a) Any adverse effects of the discharge on:
(i) Any natural and human use value identified in Schedule 1 for any affected water body;
(ii) The natural character of any affected water body;
(iii) Any amenity value supported by any affected water body; and
(iv) Any heritage value associated with any affected water body; and
(b) Any adverse effect on a significant wetland value identified in Schedule 9; and
(c) Any financial contribution for Type B wetland values that are adversely affected; and
(d) The volume, rate and method of the discharge; and
(e) The nature of the discharge; and
(f) Treatment options; and
(g) The location of the discharge point or area, and alternative receiving environments; and
(h) The likelihood of flooding, erosion, land instability, sedimentation or property damage resulting from the discharge; and
(i) The duration of the resource consent; and
(j) The information and monitoring requirements; and
(k) Any existing lawful activity associated with any affected water body; and
(l) Any bond; and
(m) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

Principal reasons for adopting

The discharge of drainage water to water can only occur if it is expressly allowed by a rule in a regional plan, or in any relevant proposed regional plan,

~~or by a regulation, or by a resource consent (Section 15(1) of the Resource Management Act 1991).~~

~~The discharge of drainage water under Rule 12.5.1.1 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. This rule is adopted to enable drainage water to be discharged while providing protection for those values and the interests of those people. Any other activity involving the discharge of drainage water is a restricted discretionary activity in order that any adverse effects can be assessed.~~

12.6A Discharge of human sewage

12.A.A General Rules for section 12.A

12.A.A.1 The discharge rules in section 12.A apply where a discharge contains human sewage.

12.A.A.2 The discharge rules in sections 12.A and 12.B apply where a discharge:

(a) Contains both human sewage and a contaminant provided for in section 12.B; or

(b) Contains human sewage and is from an industrial or trade premises, or a consented dam.

Note: ~~1. Where sullage is separated from human sewage, its discharge is covered by Rules under 12.11 and 12.13.~~

~~2.~~ The approval of particular technologies for the on-site treatment of human sewage under particular land conditions will usually require the involvement of the relevant city or district council, under the Building Act 2004 or the Health Act 1956. This Plan deals only with the effect of the discharge on the environment, and does not promote any particular technology or treatment method.

12.6.1 to 12.6.2 *[no change]*

12.~~7~~B Discharge of ~~pesticides~~ hazardous substances, hazardous wastes, specified contaminants, and stormwater; and discharges from industrial or trade premises and consented dams

12.B.A General Rules for section 12.B

12.B.A.1 The discharge rules in section 12.B apply where a discharge:

(a) Contains a contaminant provided for in section 12.B; or

(b) Is from an industrial or trade premises or consented dam.

12.B.A.2 The discharge rules in sections 12.A and 12.B apply where a discharge:

(a) Contains both human sewage and a contaminant provided for in section 12.B; or

(b) Contains human sewage and is from an industrial or trade premises, or a consented dam.

12.B.1 ~~12.7.1~~ Permitted activities: No resource consent required

12.B.1.1 ~~12.7.1.1~~ The discharge of any herbicide to water for the control of aquatic plants is a ***permitted*** activity, providing:

(a) The herbicide and any associated additive are authorised for aquatic use in New Zealand, and are used in accordance with the authorisation; and

(b) The discharge is carried out in accordance with any manufacturers' directions and is carried out by a person who holds a GROWSAFE Registered Chemical Applicator certificate ~~Growsafe Registered Applicator Certificate of Qualification~~; and

(c) The herbicide is applied in the form of a gel; and

(d) The discharge is for the purpose of controlling aquatic plants and does not exceed the quantity, concentration or rate required for that purpose; and

(e) No lawful take of water is adversely affected as a result of the discharge; and

(f) The discharger notifies, at least one week before commencing the discharge:

(i) Every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one kilometre downstream of the proposed discharge in any river or water race, or within one kilometre of the proposed discharge in any lake; *and*

(ii) *The community through Public Notice, where the discharge will occur directly into a lake, river or any Regionally Significant Wetland.*

12.B.1.2 ~~12.7.1.2~~ Except as provided for by Rule ~~12.8.1.1~~ 12.B.1.1, the land-based discharge of any pesticide onto land is a ***permitted*** activity, providing:

(a) The pesticide is authorised for use in New Zealand and is used in accordance with the authorisation; and

(b) The discharge is carried out in accordance with any manufacturers' directions; and
(c) The discharge is for the purpose of controlling animals, plants or other organisms and does not exceed the quantity, concentration or rate required for that purpose; and
(d) There is no direct discharge of the pesticide to water in any water body, drain, water race or the coastal marine area; *and*
(e) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.3 ~~12.7.1.3~~ The discharge of herbicide to air or land in circumstances where it will enter water, is a ***permitted*** activity, providing:
(a) The herbicide and any associated additive are authorised for use in or over water in New Zealand and are used in accordance with the authorisation; and
(b) The use is carried out in accordance with any manufacturers' directions; and
(c) The discharge is for the purpose of controlling plants and does not exceed the quantity, concentration or rate required for that purpose; and
(d) All reasonable measures are taken to minimise any direct discharge of the herbicide to water in any water body, drain, water race, or to the coastal marine area; and
(e) No lawful take of water is adversely affected as a result of the discharge; and
(f) The discharger notifies, at least one week before commencing the discharge:
  (i) Every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one kilometre downstream of the proposed discharge alongside any river or water race, or within one kilometre of the proposed discharge alongside any lake; *and*
  (ii) The community through Public Notice, where the discharge will occur directly into any lake, river or any Regionally Significant Wetland; and
(g) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.4 ~~12.7.1.4~~ Except as provided for by Rule ~~12.7.1.3~~ 12.B.1.3, the aerial discharge of any pesticide onto land in circumstances where it, or any contaminant associated with its breakdown, may enter water, is a ***permitted*** activity, providing:
(a) The pesticide is authorised for use in New Zealand and is used in accordance with the authorisation; and
(b) The discharge is carried out in accordance with any manufacturers' directions, by a person who holds a GROWSAFE Pilots Chemical Rating certificate ~~Growsafe Pilots' Agrichemical Rating Certificate of Qualification~~; and

(c) The discharge is for the purpose of controlling animals, plants or other organisms and does not exceed the quantity, concentration or rate required for that purpose; and
(d) All reasonable measures are taken to prevent any discharge of the pesticide within 20 metres of water in any water body, drain or water race, or of the coastal marine area; *and*
(e) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.5 *[Moved from 12.8.1.5]* The discharge of fertiliser onto production land, in circumstances where it may enter water, is a ***permitted*** activity, providing:
(a) All reasonable measures are taken to minimise any discharge of the fertiliser to water in any water body, drain or water race, or to the coastal marine area; and
(b) The discharge is carried out in accordance with the manufacturer's directions; *and*
(c) There is no damage to fauna or New Zealand native flora, in or on any Regionally Significant Wetland; and
(d) Any discharge of nitrogen also complies with Rule 12.C.1.3.

12.B.1.6 *[Moved unchanged from 12.11.2.1]* The discharge of sullage, cooling water or water from any drinking-water supply reservoir, water supply pipeline or swimming pool to water, or onto or into land in circumstances where it may enter water, is a ***permitted*** activity, providing:
(a) The discharge does not contain:
  (i) A greater concentration of faecal coliforms than that of the receiving water, or a concentration that could cause the faecal coliform concentration of the receiving water, after reasonable mixing, to exceed 150 CFU per 100 mls; or
  (ii) Any disinfectant, antiseptic or pesticide; or
  (iii) Any residual flocculant, except for aluminium at acid-soluble aluminium concentrations less than 0.1 grams per cubic metre; or
  (iv) Any free or residual chlorine at the point where the discharge enters water in any surface water body or mean high water springs; or
  (v) Human sewage; or
  (vi) Any hazardous substance; and
(b) The discharge does not increase the natural temperature of the receiving water, after reasonable mixing, by more than 3^{o} Celsius, and does not cause the temperature of the receiving water, after reasonable mixing, to rise above 25^{o} Celsius; and
(c) The discharge does not increase the suspended solids levels in the receiving water, after reasonable mixing, by more than 10 grams per cubic metre; and
(d) The discharge does not change the pH of the receiving water, after reasonable mixing, by more than 0.5 pH units; and

(e) The discharge does not, after reasonable mixing, give rise to any significant adverse effect on aquatic life; and
(f) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; *and*
(g) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
(h) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

12.B.1.7 [*Moved unchanged from 12.11.2.2]*The discharge of water which has been used for the purpose of holding live organisms to water, or onto or into land in circumstances where it may enter water, is a ***permitted*** activity, providing:
(a) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
(b) There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and
(c) No contaminant has been added that is toxic to the aquatic life of the receiving water body; and
(d) The discharge contains no pest plant material (as identified in the Pest Management Strategy for Otago 2001); and
(e) The discharge does not increase the natural temperature of the receiving waters, after reasonable mixing, by more than 3^{o} Celsius, and does not cause the temperature of the receiving water, after reasonable mixing, to rise above 25^{o} Celsius; and
(f) The discharge does not increase the suspended solids levels in the receiving water, after reasonable mixing, by more than 10 grams per cubic metre; and
(g) The discharge does not, after reasonable mixing, give rise to any significant adverse effect on aquatic life; and
(h) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.B.1.8 *[Moved unchanged from 12.4.1.1]* The discharge of stormwater from a reticulated stormwater system to water, or onto or into land in circumstances where it may enter water, is a ***permitted*** activity, providing:
(a) Where the system is lawfully installed, or extended, after 28 February 1998:
(i) *The discharge is not to any Regionally Significant Wetland; and*
(ii) Provision is made for the interception and removal of any contaminant which would give rise to the effects identified in Condition (d) of this rule; and
(b) The discharge does not contain any human sewage; and
(c) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and

(d) The stormwater discharged, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:
  (i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
  (ii) Any conspicuous change in the colour or visual clarity; or
  (iii) Any emission of objectionable odour; or
  (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
  (v) Any significant adverse effects on aquatic life.

12.B.1.9 *[Moved unchanged from 12.4.1.2]* The discharge of stormwater from any road not connected to a reticulated stormwater system to water, or onto or into land, is a ***permitted*** activity, providing:
(a) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
(b) Where the road is subject to works, provision is made for the interception of any contaminant to avoid, after reasonable mixing, the following effects in the receiving water:
  (i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
  (ii) Any conspicuous change in the colour or visual clarity; or
  (iii) Any emission of objectionable odour; or
  (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
  (v) Any significant adverse effects on aquatic life.

12.B.1.10 *[Moved substantially unchanged from 12.12.1.1]* The discharge of any contaminant, excluding settled sediment, present in water impounded by a dam that is not permitted by Rule 13.2.1.3, to water in a lake or river, is a ***permitted*** activity, providing:
(a) The purpose of the dam is not ~~used~~ for the storage of contaminants; and
(b) The ~~presence of the contaminant does not result from the damming activity or the activities of the~~ dam operator has not caused the contaminant to be discharged into the dam from which it is discharged; and
(c) The discharge, after reasonable mixing does not give rise to all or any of the following effects:
  (i) The production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials; or
  (ii) Any conspicuous change in colour or visual clarity; or
  (iii) Any emission of objectionable odour; or
  (iv) The rendering of fresh water unsuitable for consumption by farm animals; or
  (v) Any significant adverse effect on aquatic life; and
(d) The discharge ceases when an enforcement officer of the Otago Regional Council requires the discharge to cease to provide for

clean-up operations and prevent adverse effects on the environment.

12.B.1.11 *[Moved unchanged from 12.12.1.2]* Except as provided for by Rule 12.12.1.1, the discharge of a trace amount of any contaminant, originating from within a hydro-electric power structure, into water, is a ***permitted*** activity.

12.B.2 Controlled activities: Resource consent required but always granted

12.B.2.1 *[Moved unchanged from 12.11.3.1]* The discharge of tracer dye to water is a ***controlled*** activity, providing it is chemically inert, non-radioactive, and non-toxic.

In granting any resource consent for the discharge of tracer dye in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) Any adverse effects of the discharge on:
  (i) Any natural and human use value identified in Schedule 1 for any affected water body;
  (ii) The natural character of any affected water body; and
  (iii) Any amenity value supported by any affected water body; and
(b) Any adverse effect on an existing lawful take of water; and
(c) The location and timing of the discharge; and
(d) The nature of the dye; and
(e) The duration of the resource consent; and
(f) The information and monitoring requirements; and
(g) Any bond; and
(h) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

12.B.3 Restricted discretionary activities: Resource consent required

12.B.3.1 *[Moved unchanged from 12.4.2.1]* Except as provided for by Rules ~~12.4.1.1~~ 12.B.1.8 to ~~12.4.1.2~~ 12.B.1.9, the discharge of stormwater to water, or onto or into land in circumstances where it may enter water, is a ***restricted discretionary*** activity.

In considering any resource consent for the discharge of stormwater in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effects of the discharge on:
  (i) Any natural and human use value identified in Schedule 1 for any affected water body;
  (ii) The natural character of any affected water body;

(iii) Any amenity value supported by any affected water body; and
(iv) Any heritage value associated with any affected water body; and

(b) *Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and*
(c) *Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and*
(d) The volume, rate and method of the discharge; and
(e) The nature of the discharge; and
(f) Treatment options; and
(g) The location of the discharge point or area, and alternative receiving environments; and
(h) The likelihood of erosion, land instability, sedimentation or property damage resulting from the discharge of stormwater; and
(i) The potential for soil contamination; and
(j) The duration of the resource consent; and
(k) The information and monitoring requirements; and
(l) Any bond; and
(m) Any existing lawful activity associated with any affected water body; and
(n) The review of conditions of the resource consent.

12.B.4 ~~12.7.2~~ Discretionary activities: Resource consent required

~~12.7.2.1 Except as provided for by Rules 12.7.1.1 to 12.7.1.4, the discharge of any pesticide to water, land, or to air or land in circumstances where it may, or will, enter water, is a discretionary activity~~.

12.B.4.1 The discharge of water (excluding stormwater) or any contaminant from an industrial or trade premises to water or to land is a ***discretionary*** activity, unless it is permitted by Rule 12.B.1.6 or 12.B.1.7.

12.B.4.2 The discharge of any hazardous substance to water or onto or into land in circumstances which may result in that substance entering water is a ***discretionary*** activity, unless it is:
(a) Permitted by a rule in 12.B.1; or
(b) Provided for by a rule in 12.B.2 or 12.B.3.

12.B.4.3 The discharge of water or any contaminant covered in section 12.B.1 or 12.B.2, to water or onto or into land in circumstances which may result in that water or contaminant entering water, is a ***discretionary*** activity, unless it is:
(a) Permitted by a rule in 12.B.1; or
(b) Provided for by a rule in 12.B.2, 12.B.3, 12.B.4.1 or 12.B.4.2.

Principal reasons for adopting

The discharge of any pesticide to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act). The discharge of pesticide to land (under conditions that ensure it does not enter water) cannot be carried out in a manner that contravenes a rule in a regional plan or proposed regional plan (Section 15(2) of the Resource Management Act).

The discharge of the above pesticides to water or land under Rules 12.7.1.1 to 12.7.1.4, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable the use of pesticides while providing protection for those values and the interests of those people. Any other activity involving the discharge of the above materials, is a discretionary activity in order that any adverse effects can be assessed.

12.8 Discharge of agricultural waste and fertiliser

12.8.1 Permitted activities: No resource consent required

12.8.1.1 The discharge of any animal dip material onto production land is a ***permitted*** activity, providing:

(a) The dip material is lawfully authorised for use in New Zealand and is used in accordance with the authorisation; and

(b) The discharge occurs more than 50 metres from any surface water body or mean high water springs; and

(c) The discharge occurs more than 100 metres from any bore used to supply water for domestic needs or drinking water for livestock; and

(d) The discharge does not exceed 5000 litres per hectare; and

(e) The discharge is carried out on land with a continuous cover of vegetation which has a minimum of 25 mm thickness; and

(f) The discharge is not carried out on land which has already been used for the disposal of animal dip material in the previous eight months; and

(g) The discharge is carried out in accordance with any manufacturers' directions; and

(h) Contaminants from the discharge do not run off to any other person's property; and

(i) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and

(j) There is no direct discharge of animal dip material to water in any drain or water race, or to groundwater.

12.8.1.2 The discharge of contaminants that have been collected in any animal waste collection system, onto production land in Zone A of the Lower Waitaki Plains Groundwater Protection Zone (as identified on Map C9), is a ***permitted*** activity, providing:

(a) Any collection or storage system is sealed so as to prevent any contamination of water in any water body, drain or water race; and
(b) No hazardous substance is added to the material to be discharged; and
(c) The discharge occurs more than 50 metres from any surface water body, mean high water springs or any direct conduit to groundwater; and
(d) The discharge occurs more than 50 metres from any bore used to supply water for domestic needs or drinking water for livestock; and
(e) The discharge does not occur on saturated soils; and
(f) The application of animal waste does not exceed 25 mm depth at one time, and a minimum of 15 days expires before any re-application to the same land; and
(g) There is no direct discharge of animal waste to water in any drain or water race; and
(h) Effluent from the discharge does not run off onto any other person's property; and
(i) Ponding of animal waste from the discharge does not occur; and
(j) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
(k) The Nitrogen loading due to the discharge does not exceed 75 kg N per hectare per year.*

* Note in terms of Condition (k): 6.5 kg N is produced annually in the shed by a cow milked 270 days/year, requiring 866 m^2 of land area for application under ideal conditions. A 100 cow herd would require no less than 8.66 ha for land application of their waste, to be within this annual loading limit but, depending on soil moisture status, a greater area may be required in order to meet the other conditions of the rule.

12.8.1.3 The discharge of contaminants that have been collected in any animal waste collection system, onto production land in Zone A of a Groundwater Protection Zone (as identified on Maps C1-C17), is a ***permitted*** activity, providing:

(a) Any collection or storage system is sealed so as to prevent any contamination of water in any water body, drain, or water race; and
(b) No hazardous substance is added to the material to be discharged; and
(c) The discharge occurs more than 50 metres from any surface water body or mean high water springs; and
(d) The discharge occurs more than 50 metres from any bore used to supply water for domestic needs or drinking water for livestock; and
(e) The discharge does not occur on saturated soils; and

(f) There is no direct discharge of animal waste to water in any drain, or water race, or to groundwater; and
(g) Effluent from the discharge does not run off onto any other person's property; and
(h) Ponding of animal waste from the discharge does not occur; and
(i) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and
(j) The Nitrogen loading due to the discharge does not exceed 150 kg N per hectare per year*; and
(k) The discharge does not exceed the application requirements identified in Schedule 8.

* Note in terms of Condition (j): 6.5 kg N is produced annually in the shed by a cow milked 270 days/year, requiring 433 m^2 of land area for application under ideal conditions. A 100 cow herd would require no less than 4.33 ha for land application of their waste, to be within this annual loading limit but, depending on soil moisture status, a greater area may be required in order to meet the other conditions of the rule.

12.8.1.4 Except as provided for by Rule 12.8.1.2 or 12.8.1.3, the discharge of contaminants from any feed pad, stand-off pad or sacrifice paddock, into or onto land is a ***permitted*** activity providing:
(a) Any feed pad or stand-off pad established after 28 February 1998 is not within 50 metres of any surface water body; and
(b) The discharge occurs more than 50 metres from any surface water body or mean high water springs; and
(c) The discharge occurs more than 50 metres from any bore used to supply water for domestic needs or drinking water for livestock; and
(d) There is no direct discharge of contaminant to water in any drain, or water race, or to groundwater; and
(e) Effluent from the discharge does not run off to any other person's property; and
(f) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.8.1.5 *[Rule moved to 12.B.1.5]*

12.8.2 Restricted discretionary activities: Resource consent required

12.8.2.1 The discharge of contaminants from any animal waste collection system onto production land in Zone A of the Kakanui-Kauru, Shag, Roxburgh, Ettrick or Lower Taieri Groundwater Protection Zones (as identified in Maps C10-C12 and C15), is a ***restricted discretionary*** activity.

In considering any resource consent for the discharge of animal waste in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effects of the discharge on:
  (i) Any natural and human use value identified in Schedule 1 for any affected water body;
  (ii) The natural character of any affected water body;
  (iii) Any amenity value supported by any affected water body; and
  (iv) Any heritage value associated with any affected water body; and
(b) Any adverse effect on the aquifer; and
(c) Any adverse effect on an existing lawful take of water; and
(d) The volume, rate and method of discharge; and
(e) The nature of the discharge; and
(f) The location and nature of the area affected by the discharge, and alternative receiving environments; and
(g) The capacity and security of any storage; and
(h) The potential for soil contamination; and
(i) The duration of the resource consent; and
(j) The information and monitoring requirements; and
(k) Any existing lawful activity associated with any affected water body; and
(l) Any bond; and
(m) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

12.8.3 Discretionary activities: Resource consent required

12.8.3.1 Except as provided for by Rules 12.8.1.1 to 12.8.2.1, the discharge of any agricultural waste or fertiliser to water, or onto or into land in circumstances where it may enter water, is a ***discretionary*** activity.

Principal reasons for adopting

The discharge of any agricultural waste or fertiliser to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act). The discharge of agricultural waste to land (under conditions that ensure it does not enter water) cannot be carried out in a manner that contravenes a rule in a regional plan or proposed regional plan (Section 15(2) of the Resource Management Act).

The discharge of the above materials to water or land under Rules 12.8.1.1 to 12.8.1.4, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable the disposal of agricultural waste, or the use of fertiliser, while providing protection for those values and the interests of those people. Any

other activity involving the discharge of the above materials, is either a restricted discretionary or a discretionary activity in order that any adverse effects can be assessed.

12.9 Discharges from drilling and bore testing

12.9.1 Permitted activities: No resource consent required

12.9.1.1 The discharge of water associated with down-hole pump testing to water, or to land in circumstances where it may enter water, is a ***permitted*** activity, providing:

(a) The discharge is not to any wetland identified in Schedule 9; and

(b) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and

(c) The discharge, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:

(i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or

(ii) Any conspicuous change in the colour or visual clarity; or

(iii) Any emission of objectionable odour; or

(iv) The rendering of fresh water unsuitable for consumption by farm animals; or

(v) Any significant adverse effects on aquatic life.

12.9.1.2 The discharge of contaminants to land associated with drilling is a ***permitted*** activity, providing:

(a) The discharge is not to any wetland identified in Schedule 9 or any wetland higher than 800 metres above sea level; and

(b) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and

(c) There is no direct discharge of contaminant to water in any water body, drain or water race, or to the coastal marine area.

12.9.2 Restricted discretionary activities: Resource consent required

12.9.2.1 Except as provided for by Rules 12.9.1.1 and 12.9.1.2, the discharge of water associated with down-hole pump testing or contaminants associated with drilling, to water or onto or into land, in circumstances where it may enter water, is a ***restricted discretionary*** activity.

In considering any resource consent for the discharge of water associated with bore testing or contaminants associated with drilling in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effects of the discharge on:

(i) Any natural and human use value identified in Schedule 1 for any affected water body;

(ii) The natural character of any affected water body;
(iii) Any amenity value supported by any affected water body; and
(iv) Any heritage value associated with any affected water body; and

(b) Any adverse effect on a significant wetland value identified in Schedule 9 or any wetland higher than 800 metres above sea level; and
(c) Any financial contribution for Type B wetland values that are adversely affected; and
(d) Any adverse effect on the aquifer; and
(e) Any adverse effect on an existing lawful take of water; and
(f) The volume, rate and method of the discharge; and
(g) The nature of the discharge; and
(h) Treatment options; and
(i) The location of the discharge point or area, and alternative receiving environments; and
(j) The potential for soil contamination; and
(k) The duration of the resource consent; and
(l) The information and monitoring requirements; and
(m) Any existing lawful activity associated with any affected water body; and
(n) Any bond; and
(o) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

Principal reasons for adopting

The discharge of any water associated with down-hole pump testing or contaminants associated with drilling, to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act). The discharge of such material to land (under conditions that ensure it does not enter water) cannot be carried out in a manner that contravenes a rule in a regional plan or proposed regional plan (Section 15(2) of the Resource Management Act).

The discharge of the above materials to water or land under Rules 12.9.1.1 and 12.9.1.2, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable the down-hole pump testing and drilling to occur, while providing protection for those values and the interests of those people. Any other activity involving the discharge of the above materials, is a restricted discretionary activity in order that any adverse effects can be assessed.

~~12.10 Discharges from vessels~~

~~12.10.1 Permitted activities: No resource consent required~~

~~12.10.1.1 The discharge of any contaminant or water from a vessel into water is a ***permitted*** activity, providing:~~

~~(a) The discharge is not to any wetland identified in Schedule 9; and~~

~~(b) No non-biodegradable material is included in the discharge; and~~

~~(c) The discharge contains no hazardous substance, human sewage, petroleum product, pest plant material (as identified in the Pest Management Strategy for Otago 2001) or waste from an industrial or trade process; and~~

~~(d) The discharge, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:~~

~~(i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or~~

~~(ii) Any conspicuous change in the colour or visual clarity; or~~

~~(iii) Any emission of objectionable odour; or~~

~~(iv) The rendering of fresh water unsuitable for consumption by farm animals; or~~

~~(v) Any significant adverse effects on aquatic life.~~

~~12.10.2 Restricted discretionary activities: Resource consent required~~

~~12.10.2.1 Except as provided for by Rule 12.10.1.1, the discharge of any contaminant or water from a vessel, or from the maintenance of a vessel, to water, or onto or into land in circumstances where it may enter water, is a ***restricted discretionary*** activity.~~

~~In considering any resource consent for the discharge of contaminants or water from a vessel, or from the maintenance of a vessel in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:~~

~~(a) Any adverse effects of the discharge on:~~

~~(i) Any natural and human use value identified in Schedule 1 for any affected water body;~~

~~(ii) The natural character of any affected water body;~~

~~(iii) Any amenity value supported by any affected water body; and~~

~~(iv) Any heritage value associated with any affected water body; and~~

~~(b) Any adverse effect on a significant wetland value identified in Schedule 9; and~~

~~(c) Any financial contribution for Type B wetland values that are adversely affected; and~~

~~(d) The volume, rate and method of the discharge; and~~

~~(e) The nature of the discharge; and~~

~~(f) The location of the discharge point or area, and alternative receiving environments; and~~

~~(g) Treatment options; and~~

(h) The duration of the resource consent; and
(i) The information and monitoring requirements; and
(j) Any existing lawful activity associated with any affected water body; and
(k) Any bond; and
(l) The review of conditions of the resource consent.

Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.

Principal reasons for adopting

The discharge of any water or contaminant to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act).

The discharge of the above materials to water or land under Rule 12.10.1.1 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. This rule is adopted to enable discharges from vessels, while providing protection for those values and the interests of those people. Any other activity involving the discharge of the above materials, is a restricted discretionary activity in order that any adverse effects can be assessed.

12.11 Discharge of water or tracer dye

12.11.1 Prohibited activities: No resource consent will be granted

12.11.1.1 The discharge of water from nuclear power generation or nuclear weapon manufacturing is a ***prohibited*** activity for which no resource consent will be granted.

12.11.2 Permitted activities: No resource consent required

12.11.2.1 *[Rule moved to 12.B.1.6]*

12.11.2.2 *[Rule moved to 12.B.1.7]*

12.11.2.3 Except as provided for by Rules 12.4.1, 12.5.1, 12.9.1.1, 12.10.1.1, 12.11.1.1, 12.11.2.1 and 12.11.2.2, the discharge of any other water to water, or onto or into land in circumstances where it may enter water, is a ***permitted*** activity, providing:
(a) In the case of a discharge from a dam, the conditions of Rule 12.3.2.1 are met; and
(b) Except in the case of surplus irrigation water from a system that was operational on or before 28 February 1998, the water is discharged to a water body with the same coastal mouth as that from which the water has been sourced; and
(c) The discharge does not contain any hazardous substance; and

(d) The discharge does not increase the natural temperature of the receiving water, after reasonable mixing, by more than 3o Celsius, and does not cause the temperature of the receiving water, after reasonable mixing, to rise above 25o Celsius; and
(e) The discharge does not increase the suspended solids levels in the receiving water, after reasonable mixing, by more than 10 grams per cubic metre; and
(f) The discharge does not, after reasonable mixing, give rise to any significant adverse effect on aquatic life; and
(g) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage.

12.11.3 Controlled activities: Resource consent required but always granted

12.11.3.1 *[Rule moved to 12.B.2.1]*

Principal reasons for adopting

The discharge of the above water or tracer dye to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act).

Rule 12.11.1.1 is adopted to provide for and be fully consistent with Policy 12.5.1 of the Regional Policy Statement for Otago. The rule prohibits all discharges of water used in nuclear power generation plants and in nuclear weapons manufacturing.

The Otago Regional Council considers the effects of discharging water as identified in Rule 12.11.2.1 to 12.11.2.3, will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person. These rules are adopted to enable discharges of water, while providing protection for those values and the interests of those people.

Rule 12.11.3.1 is adopted to ensure that the Otago Regional Council has the opportunity to manage the colour change likely to arise from the discharge of tracer dye to water.

12.12 Discharges from dams and reservoirs

12.12.1 Permitted activities: No resource consent required

12.12.1.1 *[Rule moved to 12.B.1.10]*

12.12.1.2 *[Rule moved to 12.B.1.11]*

Principal reasons for adopting

Rule 12.12.1.1 recognises that a dam operator is not always able to control what enters and leaves a dam. Environmental safeguards are contained in Condition (d) and the discharge must cease if requested by an enforcement officer for containment and clean-up operations.

~~Rule 12.12.1.2 recognises that minute amounts of contaminants may be discharged from hydro-electric facilities during normal operations without any measurable adverse effect on the environment.~~

~~12.13 Other discharges~~

~~12.13.1 Discretionary activities: Resource consent required~~

~~12.13.1.1 Except as provided for by Rules 12.4.1.1 to 12.12.1.2, the discharge of water or contaminants to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***discretionary*** activity.~~

~~**Principal reasons for adopting**~~

~~The discharge of any water or contaminants to water can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, by a resource consent, or by regulation (Section 15(1) of the Resource Management Act).~~

~~Under Rule 12.13.1.1, any other discharge not specified in the rules of this Plan is a discretionary activity in order that any adverse effects can be assessed.~~

12.C Other discharges

12.C.A General Rules for section 12.C

12.C.A.1 Discharge rules in section 12.C apply to any discharge not provided for in sections 12.A, 12.B or 13.5.

12.C.A.2 Within section 12.C, prohibited activity rules prevail over any permitted, controlled, restricted discretionary and discretionary activity rules.

12.C.0 Prohibited activities: No resource consent will be granted

12.C.0.1 The discharge of any contaminant to water, that produces an objectionable odour, or a conspicuous oil or grease film, scum, or foam in any:

(i) Lake, river or Regionally Significant Wetland; or

(ii) Drain or water race that flows to a lake, river or Regionally Significant Wetland; or

(iii) Bore or sump,

is a ***prohibited*** activity.

12.C.0.2 The discharge of any contaminant from an animal waste system, silage storage or a composting process:

(i) To any lake, river or Regionally Significant Wetland; or

(ii) To any drain or water race that connects to a lake, river or Regionally Significant Wetland; or

(iii) To the bed of any lake, river or Regionally Significant Wetland; or
(iv) To any bore or sump; or
(v) To land within 50 metres of:
(a) Any lake, river or Regionally Significant Wetland; or
(b) Any bore or sump; or
(vi) To saturated land; or
(vii) That results in ponding,
is a ***prohibited*** activity.

12.C.0.3 Any discharge of sediment from disturbed land to water in any:
(i) Lake, river or Regionally Significant Wetland; or
(ii) Drain or water race that flows to a lake, river or Regionally Significant Wetland,
where no measure is taken to mitigate sediment runoff, is a ***prohibited*** activity.

12.C.1 Permitted activities: No resource consent required

12.C.1.1 The discharge of water or any contaminant to water, or onto or into land in circumstances which may result in that contaminant entering water, is a ***permitted*** activity, providing:
(a) The discharge does not result in flooding, erosion, land instability or property damage; and
(b) There is no discharge of water from one catchment to water in another catchment; and
(c) The discharge does not change the water level range or hydrological function of any Regionally Significant Wetland; and
(d) Where the discharge first enters water in any lake, river, wetland, or any open drain or water race that flows to a lake, river or wetland, the discharge:
(1) From 01 April 2020, does not exceed the relevant limits given in Schedule 16A, when, at the representative flow monitoring site, the water flow is at or below the reference flow indicated in Schedule 16B; and
(2) Does not contain sediment that results in:
a. A visual change in colour or clarity; or
b. Noticeable local sedimentation,
in the receiving water; and
(3) Does not have an odour, oil or grease film, scum or foam; and
(4) Does not have floatable or suspended materials, other than inorganic sediment; and
(e) Any discharge of nitrogen also complies with Rule 12.C.1.3.

12.C.1.2 Notwithstanding Rule 12.C.1.1, the discharge of water or any contaminant from:

(i) A water race that does not convey irrigation runoff; or

(ii) A dam:

(1) Permitted under Rule 13.2.1.3; and

(2) Not for the purpose of the storage of contaminants,

to any lake, river, wetland, or any water race that flows to a lake, river or wetland, is a ***permitted*** activity, providing:

(a) The race or dam operator has not caused the contaminant to be discharged into the race or dam from which it is discharged; and

(b) There is no discharge of water from one catchment to water in another catchment; and

(c) There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and

(d) The discharge does not:

(1) Result in flooding, erosion, land instability or property damage; and

(2) Result in a conspicuous change in colour or clarity; and

(3) Have floatable or suspended materials.

12.C.1.3 The discharge of nitrogen[1] onto or into land in circumstances which may result in nitrogen entering groundwater, is a ***permitted*** activity, providing:

(a) From 01 April 2020, the nitrogen leaching rate does not exceed:

(i) 10 kgN/ha/year on that area of the landholding located over the relevant Nitrogen Sensitive Zone identified in Maps H5 and H6; and

(ii) 20 kgN/ha/year on that area of the landholding located over the relevant Nitrogen Sensitive Zone identified in Maps H1 to H4; and

(iii) 30 kgN/ha/year on that area of the landholding located outside any Nitrogen Sensitive Zone identified in Maps H1 to H6,

as calculated using OVERSEER® version 6.0; and

(b) From 1 May 2014, the landholder will:

(i) Maintain a record of all necessary data to run OVERSEER® version 6.0; and

(ii) Provide Council upon request with:

1) An OVERSEER® version 6.0 output and input parameter report prepared by an accredited OVERSEER® version 6.0 user; or

2) All necessary data to run OVERSEER® version 6.0.

[1] For the purpose of Rule 12.C.1.3, nitrogen comprises of organic nitrogen, ammoniacal nitrogen, nitrite nitrogen and nitrate nitrogen forms.

12.C.2 Restricted discretionary activities: Resource consent required

12.C.2.1 The discharge of water or any contaminant:

(i) To water; or

(ii) Onto or into land in circumstances which may result in that contaminant entering water,

is a ***restricted discretionary*** activity, unless the discharge:

(a) Is prohibited by a rule in 12.C.0; or

(b) Is permitted by Rules 12.C.1.1 or 12.C.1.2; or

(c) Will result in flooding, erosion, land instability or property damage; or

(d) Is of water from one catchment to water in another catchment; or

(e) Will change the water level range or hydrological function of any Regionally Significant Wetland; or

(f) Has previously been authorised by resource consent granted under this rule.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.2 The discharge of water or any contaminant:

(i) To water; or

(ii) Onto or into land in circumstances which may result in that contaminant entering water,

from a short-term activity with a short-term effect, is a ***restricted discretionary*** activity, unless the discharge:

(a) Is prohibited by a rule in 12.C.0; or

(b) Is permitted by Rules 12.C.1.1 or 12.C.1.2; or

(c) Will result in flooding, erosion, land instability or property damage; or

(d) Is of water from one catchment to water in another catchment; or

(e) Will change the water level range or hydrological function of any Regionally Significant Wetland.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.3 The discharge of nitrogen onto or into land in circumstances which may result in nitrogen entering groundwater is a ***restricted discretionary*** activity, unless the discharge:

(a) Is prohibited by a rule in 12.C.0; or

(b) Is permitted by Rule 12.C.1.3, or

(c) Has previously been authorised by a resource consent granted under this rule.

The matters to which the Council has restricted the exercise of its discretion are set out in Rule 12.C.2.4.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

12.C.2.4 Restricted discretionary activity discretions

In considering any resource consent in terms of Rules 12.C.2.1 to 12.C.2.3, the Council will restrict the exercise of its discretion to:

(a) The nature, type, volume, frequency of the discharge; and
(b) The concentration and loading of contaminants in the discharge; and
(c) In the case of an application under Rules 12.C.2.1 and 12.C.2.3, the staged timeframe for achieving the permitted activity conditions in Rules 12.C.1.1 or 12.C.1.3; and
(d) In the case of an application under 12.C.2.2, the staged timeframe to address adverse effects on water quality; and
(e) In the case of an application previously consented under Rule 12.C.2.2, compliance with conditions of the previous resource consent; and
(f) Any changes to infrastructure and the staging of implementation of those changes; and
(g) Any adverse effects on water quality, including cumulative effects; and
(h) Any adverse effect of the discharge on any natural or human use values; and
(i) The extent to which the contaminant results from the activities of the applicant; and
(j) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and
(k) Any erosion, land instability, sedimentation or property damage resulting from the discharge; and
(l) Any financial contribution for any Regionally Significant Wetland or on any regionally significant wetland value; and
(m) The information and monitoring requirements; and
(n) The duration of the resource consent; and
(o) The review of conditions of the resource consent.

12.C.3 Discretionary activities: Resource consent required

12.C.3.1 The discharge of water from one catchment to water in another catchment is a ***discretionary*** activity.

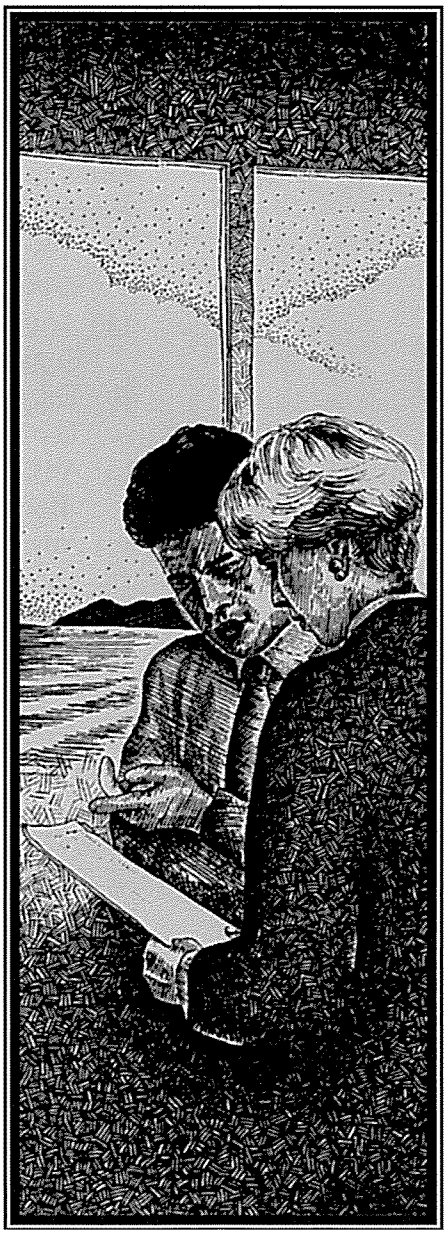
12.C.3.2 The discharge of water or any contaminant:

(i) To water; or
(ii) Onto or into land in circumstances which may result in that contaminant entering water

is a ***discretionary*** activity, unless it is:
(a) Prohibited by a rule in 12.C.0; or
(b) Permitted by a rule in 12.C.1; or
(c) Provided for by a rule in 12.C.2.

13

Rules: Land Use on Lake or River Beds *or Regionally Significant Wetlands*



13.1 The use of a structure

13.1.1 Permitted activities: No resource consent required

13.1.1.1 The use of any structure that is fixed in, on, under, or over the bed of any lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

(a) The structure is lawfully established; and

(b) In the case of a change in use, the effects of the new use of the structure are the same or similar in character, intensity and scale as the preceding use; and

(ba) Measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland; and

(c) The structure is maintained in good repair.

13.1.2 Restricted discretionary activities: Resource consent required

13.1.2.1 Except as provided for by Rule 13.1.1.1, the use of a structure that is fixed in, on under or over the bed of any lake or river, or any Regionally Significant Wetland, is a ***restricted discretionary*** activity.

In considering any resource consent for the use of any structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effect on the function or structural integrity of the structure; and

(ab) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland; and.

(b) The duration of the resource consent; and

(c) The information and monitoring requirements; and

(d) Any insurance or other appropriate means of remedying the effects of failure; and

(e) Any bond; and

(f) The review of conditions of the resource consent.

~~Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.~~

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.2 The erection or placement of a structure

13.2.1 Permitted activities: No resource consent required

13.2.1.1 – 13.2.1.6 *[no change]*

13.2.1.7 The erection or placement of any single span bridge ~~or culvert in, on or~~ over the bed of a lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

~~(a) The size of the catchment upstream of the bridge or culvert is no more than 50 hectares in area; and~~

(b) The bridge ~~or culvert,~~ or its erection or placement, does not cause any flooding, nor cause any erosion of the bed or banks of the lake or river, or Regionally Significant Wetland, or property damage; and

~~(c) The site is left tidy following the erection or placement.~~

(d) There is no reduction in the flood conveyance of the lake, river or Regionally Significant Wetland; and

(e) The bridge soffit is no lower than the top of the higher river bank; and

(f) The bridge and its abutments are secured against bed erosion, flood water and debris loading; and

(g) Where the bridge is intended for use by stock, measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland.

13.2.1.7A The erection or placement of any boardwalk in, on or over a Regionally Significant Wetland, is a ***permitted*** activity, providing the erection or placement, or the boardwalk, does not cause any flooding, nor any erosion.

13.2.1.7B Unless covered by Rule 13.2.1.7 or 13.2.1.7A, the erection or placement of any crossing in or on the bed of a lake or river, or any Regionally Significant Wetland, is a ***permitted*** activity, providing:

(a) The crossing, or its erection or placement, does not cause any flooding, nor cause erosion of the bed or banks of the lake, river or Regionally Significant Wetland, or property damage; and

(b) The top of the crossing is no higher than 2 metres above the lowest part of the bed where it is located; and

(c) The crossing does not exceed 12 metres along the length of the lake or river; and

(ca) No more than 24 metres of crossing occurs on any 250 metre stretch of any lake or river, with a minimum separation distance between any two crossings in or on the same lake or river of 12 metres; and

(d) There is no reduction in the flood conveyance of the lake, river or Regionally Significant Wetland; and

(e) The crossing and any ancillary structures are secured against bed erosion, flood water and debris loading; and

(f) Fish passage is not impeded; and

(g) Movement of bed material is not impeded; and

(h) Where the crossing is intended for use by stock, measures are taken to avoid animal waste entering the lake, river or Regionally Significant Wetland.

13.2.1.8 *[no change]*

13.2.2 Restricted discretionary activities: Resource consent required

13.2.2.1 Except as provided for by Rules 13.2.1.1, 13.2.1.2 and 13.2.1.5 to 13.2.1.7B, the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or *crossing* in, on, under, or over the bed of any lake or river, *or the erection or placement of any fence, pipe, line, cable, jetty, bridge, crossing or boardwalk in, on, under or over any Regionally Significant Wetland,* is a ***restricted discretionary*** activity.

In considering any resource consent for the erection or placement of any fence, pipe, line, cable, whitebait stand, eel trap, maimai, jetty, single span bridge or *crossing* in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effects of the activity on:
  (i) Any natural and human use value identified in Schedule 1 for any affected water body;
  (ii) The natural character of any affected water body;
  (iii) Any amenity value supported by any affected water body; and
  (iv) Any heritage value associated with any affected water body; and

(aa) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and

(b) Flow and sediment processes; and
(c) Any adverse effect on a defence against water; and
(d) Any adverse effect on existing public access; and
(e) Fish passage; and
(f) The method of construction; and
(fa) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland; and
(g) The duration of the resource consent; and
(h) The information and monitoring requirements; and
(i) Any existing lawful activity associated with any affected water body; and
(j) Any bond; and
(k) The review of conditions of the resource consent.; and
(l) Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected.

~~Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity~~.

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.2.3 *[no change]*

13.3 The repair, maintenance, extension, alteration, replacement or reconstruction of a structure

13.3.1 *[no change]*

13.3.2 Restricted discretionary activities: Resource consent required

13.3.2.1 Except as provided for by Rules 13.3.1.1 and 13.3.1.2, the extension, alteration, replacement or reconstruction of any structure, fixed in, on, under or over the bed of any lake or river, *or any Regionally Significant Wetland*, is a ***restricted discretionary*** activity.

In considering any resource consent for the extension, alteration, replacement or reconstruction of any structure in terms of this rule, the Otago Regional Council will restrict the exercise of its discretion to the following:

(a) Any adverse effects of the activity on:
  (i) Any natural and human use value identified in Schedule 1 for any affected water body;
  (ii) The natural character of any affected water body
  (iii) Any amenity value supported by any affected water body; and
  (iv) Any heritage value associated with any affected water body; and

(aa) Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and

(b) Flow and sediment processes; and
(c) Any adverse effect on a defence against water; and
(d) Any adverse effect on existing public access; and
(e) The method of construction; and
(f) The duration of the resource consent; and
(g) The information and monitoring requirements; and
(h) Any existing lawful activity associated with any affected water body; and
(i) Any insurance or other appropriate means of remedying the effects of failure; and
(j) Any bond; and
(k) *A financial contribution if the structure is a dam, or for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and*
(l) The review of conditions of the resource consent~~.~~; and
(m) Any measures to avoid animal waste entering the lake, river, or Regionally Significant Wetland.

~~Applications may be considered without notification under Section 93 and without service under Section 94(1) of the Resource Management Act on persons who, in the opinion of the consent authority, may be adversely affected by the activity.~~

The Consent Authority is precluded from giving public notification of an application for a resource consent under this rule.

13.4 Demolition or removal of a structure *[no change]*

13.5 Alteration of the bed of a lake or river, *or of a Regionally Significant Wetland*

13.5.A General rules for section 13.5

13.5.A.1 Discharges of bed material resulting from the alteration of the bed of a lake or river, or a Regionally Significant Wetland, are addressed only through rules in section 13.5.

Note: Alteration includes any disturbance, and the associated remobilisation (discharge) and redeposition (deposit) of bed material already present, ~~and~~ reclamation or deposition of cleanfill associated with works in the bed.

13.5.1 Permitted activities: No resource consent required

13.5.1.1 The disturbance of the bed of any lake or river, *or any Regionally Significant Wetland,* and any resulting discharge or deposition of bed material associated with:

(i) The erection, placement, extension, alteration, replacement, reconstruction, repair, maintenance, demolition or removal, of any structure that is fixed in, on, under or over the bed of any lake or river, *or the wetland*; or

(ii) The clearance of debris or alluvium from within, or immediately surrounding, any structure in order to safeguard the function or structural integrity of the structure; or

(iii) The maintenance or reinstatement of a water intake, in order to enable the exercise of a lawful take of water,

is a ***permitted*** activity, providing:

(a) Except in the case of the demolition or removal of a structure, the structure is lawfully established; and

(b) Except in the case of (i), there is no increase in the scale of the existing structure; and

(c) The bed *or wetland* disturbance is limited to the extent necessary to undertake the work; and

(d) The bed *or wetland* disturbance does not cause any flooding or erosion; and

(e) The time necessary to carry out and complete the whole of the work within the wetted bed of the lake or river does not exceed 10 ~~consecutive~~ hours in duration; and

(f) All reasonable steps are taken to minimise the release of sediment to the lake or river during the disturbance, and there is

no conspicuous change in the colour or visual clarity of the water body beyond a distance of 250 metres downstream of the disturbance; and

(g) No lawful take of water is adversely affected as a result of the bed *or wetland* disturbance; and

(h) The site is left tidy following completion of the activity; *and*

(i) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no change to the water level range or hydrological function of any Regionally Significant Wetland; and

(j) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

13.5.1.2 The disturbance of the bed of any river for the purpose of clearing any material that has accumulated as a result of a storm event, excluding alluvium, in order to maintain the flood carrying capacity of the bed of the river, and any resulting discharge or deposition of bed material, is a ***permitted*** activity, providing:

(a) The bed disturbance is limited to the extent necessary to clear the debris; and

(b) The bed disturbance does not cause any flooding or erosion; and

(c) The time necessary to carry out and complete the whole of the work within the wetted bed does not exceed 10 ~~consecutive~~ hours in duration; and

(d) All reasonable steps are taken to minimise the release of sediment to the lake or river during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 250 metres downstream of the disturbance; and

(e) No lawful take of water is adversely affected as a result of the bed disturbance; and

(f) The site is left tidy following completion of the activity.

13.5.1.3 The disturbance or reclamation of, or the deposition of any substance in, on or under, *either* the bed of any lake or river, *or any Regionally Significant Wetland,* and any resulting discharge of bed material, for the purpose of:

(i) The erection, placement, extension, alteration, replacement, reconstruction, repair, maintenance, demolition or removal, of any structure carried out under Rules 13.2.1.1 to 13.2.1.7B, 13.3.1.1, 13.3.1.2 or 13.4.1.1; or

(ii) The repair or maintenance of any defence against water constructed or placed by artificial means,

is a ***permitted*** activity providing:

(a) The structure or defence against water is lawfully established; and

(b) There is no change to the original scale of the structure or defence against water; and

(c) The time necessary to carry out and complete the whole of the work within the wetted bed of the lake or river does not exceed 10 ~~consecutive~~ hours in duration; and
(d) All reasonable steps are taken to minimise the release of sediment to the lake, river *or wetland* during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 250 metres downstream of the activity; and
(e) No lawful take of water is adversely affected as a result of the activity; and
(f) In the case of reclamation or deposition, only cleanfill is used; and
(g) The site is left tidy following completion of the activity; *and*
(h) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no change to the water level range or hydrological function of any Regionally Significant Wetland; and
(i) Except for activities covered by Rules 13.2.1.5, 13.2.1.6, or 13.2.1.8, there is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

13.5.1.4 The disturbance or reclamation of, or the deposition of any substance in, on or under, the bed of any lake or river, for the purpose of the reinstatement of any bank of a lake or river which has been eroded by a flood event, and any resulting discharge of bed material, is a ***permitted*** activity providing:
(a) There is no change to the scale of the bank existing before the flood event; and
(b) The activity is carried out within twelve months of the flood event that caused the erosion; and
(c) The time necessary to carry out and complete the whole of the work within the wetted bed does not exceed 10 ~~consecutive~~ hours in duration; and
(d) All reasonable steps are taken to minimise the release of sediment to the lake or river during the activity, and there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 250 metres downstream of the activity; and
(e) No lawful take of water is adversely affected as a result of the repair or maintenance; and
(f) In the case of reclamation or deposition, only cleanfill is used; and
(g) The site is left tidy following completion of the activity.

13.5.1.5 The disturbance of the bed of any lake or river associated with the control of aquatic pest plants, and any resulting discharge or deposition of bed material, is a permitted activity providing:
(a) The control is carried out under Rule 13.7.1.1, or under a resource consent; and
(b) The bed disturbance is limited to that which is necessary for the removal of the plant material.

13.5.1.5A *[no change]*

13.5.1.5B The disturbance of any Regionally Significant Wetland, for the purpose of drain maintenance, and any resulting discharge or deposition of bed material, *is a* ***permitted*** *activity, providing:*

(a) The disturbance is limited to that necessary to address water accumulating on land outside of any Regionally Significant Wetland; and

(b) The drain was lawfully constructed on or before 2 July 2011; and

(c) The drain has been maintained within the preceding 15 years; and

(d) There is no increase in the drain dimensions from the last maintenance; and

(e) All reasonable measures are taken to minimise the release of sediment to any water body during the disturbance, and there is no conspicuous change in the colour or visual clarity of any water body beyond a distance of 100 metres downstream of the disturbance; and

(f) All reasonable steps are taken to minimise damage to fauna and New Zealand native flora; and

(g) At least ten working days prior to commencing the maintenance, the Otago Regional Council is given notice of the location and date of the drain maintenance; and

(h) Within ten working days after the drain maintenance is carried out, the Otago Regional Council is provided with:

(i) Photographs of:

(a) The drain immediately before and after maintenance; and

(b) The wetland adjoining the drain being maintained, showing vegetation cover; and

(ii) Dimensions (longitude and cross-section) of the drain immediately before and after maintenance.

13.5.1.6 – 13.5.1.7 *[no change]*

~~13.5.1.8 The disturbance of the bed of any lake or river by livestock is a ***permitted*** activity, providing:~~

~~(a) No lawful take of water is adversely affected as a result of the activity; and~~

~~(b) The activity does not cause or induce conspicuous slumping, pugging or erosion; and~~

~~(c) The activity does not cause any conspicuous change in the colour or visual clarity of the lake or river; and~~

~~(d) The activity does not adversely affect any Type A or B values of any wetland identified in Schedule 9; and~~

~~(e) The activity does not significantly disturb indigenous vegetation or the habitat of indigenous fauna, trout or salmon in, on, or under the bed of any lake or river; and~~

~~(f) No feeding out occurs on the bed of any lake or river.~~

13.5.1.8A The disturbance of the bed of any lake or river, or any Regionally Significant Wetland by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a ***permitted*** activity, providing it does not:

(a) Involve feeding out; or

(b) Cause or induce noticeable slumping, pugging or erosion; or

(c) Result in a visual change in colour or clarity of water; or

(d) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland.

~~Note: This rule does not authorise any discharge to water or discharge to land in circumstances where contaminants may enter water. Sections 15(1)(a) and 15(1)(b) of the Act apply.~~

13.5.1.8B The disturbance of the bed of any lake or river, or any Regionally Significant Wetland, by livestock where they are being intentionally driven, and any resulting discharge or deposition of bed material, is a ***permitted*** activity, providing there is no:

(a) Existing structure available for use, and there is no suitable site for the erection or placement of a structure, to avoid bed disturbance; or

(b) Visual change in colour or clarity of water, after the disturbance ceases; or

(c) Noticeable slumping, pugging or erosion.

13.5.1.9 The drilling of land on the bed of any lake or river, other than for the purpose of creating a bore, and any disturbance of the bed associated with that drilling, and any resulting discharge or deposition of bed material, is a ***permitted*** activity providing:

(a) The bed disturbance is limited to the extent necessary for the drilling; and

(b) The drill hole is filled or sealed on completion of the work so that contaminants are prevented from entering the hole at any level; and

(c) The activity does not occur in the wet bed; and

(d) The site is left tidy following completion of the activity.

13.5.2 – *[no change]*

13.5.3 Discretionary activities: Resource consent required

13.5.3.1 *[unchanged]*

13.5.3.2 Unless covered by Rules 13.5.1.1, 31.5.1.3, 13.5.1.5A, or 13.5.1.5B 13.5.1.8A, 13.5.1.8B or 13.5.2.1, *the alteration of any Regionally Significant Wetland, is a* ***discretionary*** *activity.*

Principal reasons for adopting

The alteration of the bed of a lake or river can only occur if it is expressly allowed by a rule in a regional plan or any proposed regional plan, or by a resource consent (Section 13(1) of the Resource Management Act).

No person may disturb, remove, damage, or destroy any plant or part of any plant (whether exotic or indigenous) or the habitats of any such plants or of animals in, on, or under the bed of any lake or river in a manner that contravenes a rule in a regional plan or proposed regional plan, unless that activity is expressly allowed by a resource consent or is an existing lawful use allowed by Section 20A of the Act (Resource Management Act Section 13(2)(b)).

~~In relation to Rule 13.5.1.8, Conditions (a) to (d) of the rule address Section 13(1) of the Resource Management Act and Conditions (d) and (e) address Section 13(2)(b) of the Resource Management Act.~~ Rules 13.5.2.1 and 13.5.3.1 provide for the preservation of the natural state of the shoreline of Lake Wanaka, consistent with Section 4 (c) of the Lake Wanaka Preservation Act 1973.

The alteration of the bed of a lake or river under Rules 13.5.1.1 to 13.5.1.9 will have no more than minor adverse effects on the natural and human use values supported by water bodies, or on any other person, since the activities involve minimal disturbance of the bed. Any other activity involving the alteration of the bed of a lake or river is either a restricted discretionary or a discretionary activity in order that any adverse effects can be assessed.

13.6 The introduction or planting of vegetation *[no change]*

13.7 The removal of vegetation *[no change]*

15

Methods other than Rules

15.1 to 15.4 *[unchanged]*

15.5 Codes of practice and environmental management systems

15.5.1 Development and implementation of codes of practice and environmental management systems

15.5.1.1 The Otago Regional Council ~~will~~ encourages and supports the development and use of ~~assist agricultural, recreational and industry groups to prepare~~ codes of practice and environmental management systems that ~~for various land use activities, in order to~~ reduce adverse effects on water resources.

~~15.5.1.2 The Otago Regional Council will encourage landholders and industry groups to implement codes of practice, environmental management systems and management guidelines that assist to avoid, remedy or mitigate any adverse effects of activities on Otago's water resources and any adverse effects of land discharges on soil or land stability.~~

~~Land use activities of particular concern include:~~
~~(a) Fertiliser application;~~
~~(b) Use and storage of hazardous substances;~~
~~(c) Agricultural and horticultural spraying;~~
~~(d) Intensive livestock activities, including dairy farming, pig farming and silage production;~~
~~(e) Land use and disturbance in the margins of lakes and rivers;~~
~~(f) Extraction of bed material from Otago's lakes and rivers;~~
~~(g) Forestry operations; and~~
~~(h) Other activities which can involve land disturbance.~~

~~The Council will support codes of practice and management guidelines that reduce the adverse effects of land use activities on water quality. This will involve:~~
~~(i) Working with landholders and relevant industry and community groups to identify how the identified land use activities can be carried out in ways which minimise non-point source contamination;~~
~~(ii) Encouraging industry and landholders to implement, where appropriate, existing codes of practice or management guidelines; and~~
~~(iii) Maintaining a register of codes of practice and guidelines, supplied by industries that, if adhered to, would assist with compliance with specified rules in this Plan.~~

~~**Principal reasons for adopting**~~
~~Codes of practice and environmental management systems set guidelines or standards, and practical mechanisms to influence the use and development of land and the effects of activities on water. Although generally voluntary, codes of practice and environmental management systems are recognised as one of the~~

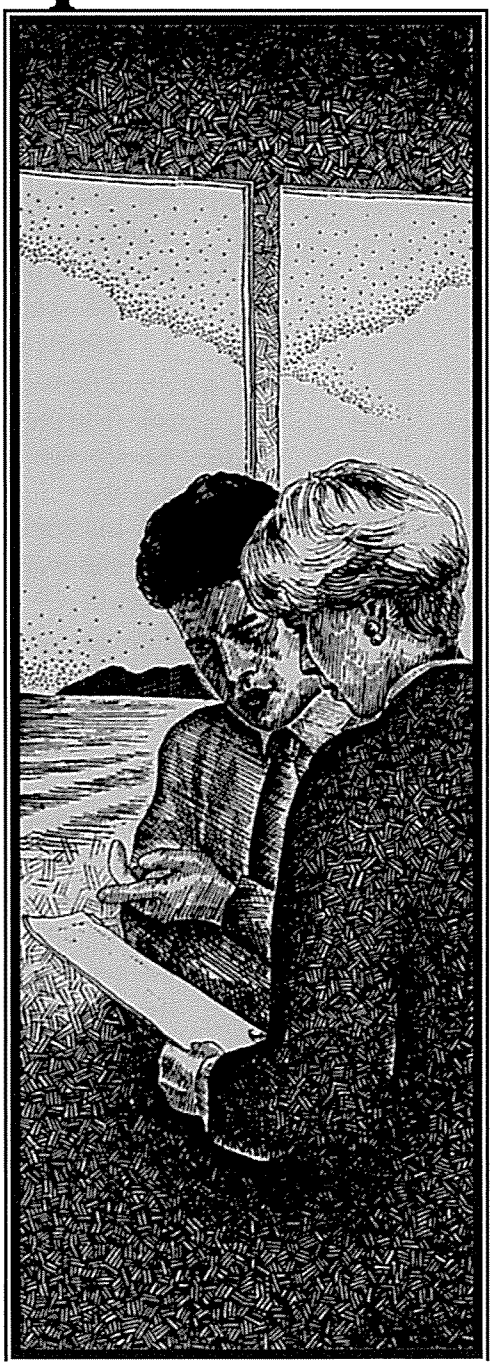
~~options that are at the Otago Regional Council's disposal, to achieve desirable outcomes for water bodies. An environmental management system may be developed which is applicable to the specific needs of a single business, while a code of practice may be developed for use throughout an industry.~~

~~The first method is adopted to encourage the development of codes of practice and environmental management systems, while the second method is adopted to ensure ongoing support is provided once guidelines are in place.~~

15.6to 15.9 *[unchanged]*

16

Information Requirements



16.1 Introduction *[no change]*

16.2 General information required *[no change]*

16.3 Specific information requirements

16.3.1 to **16.3.2** *[no change]*

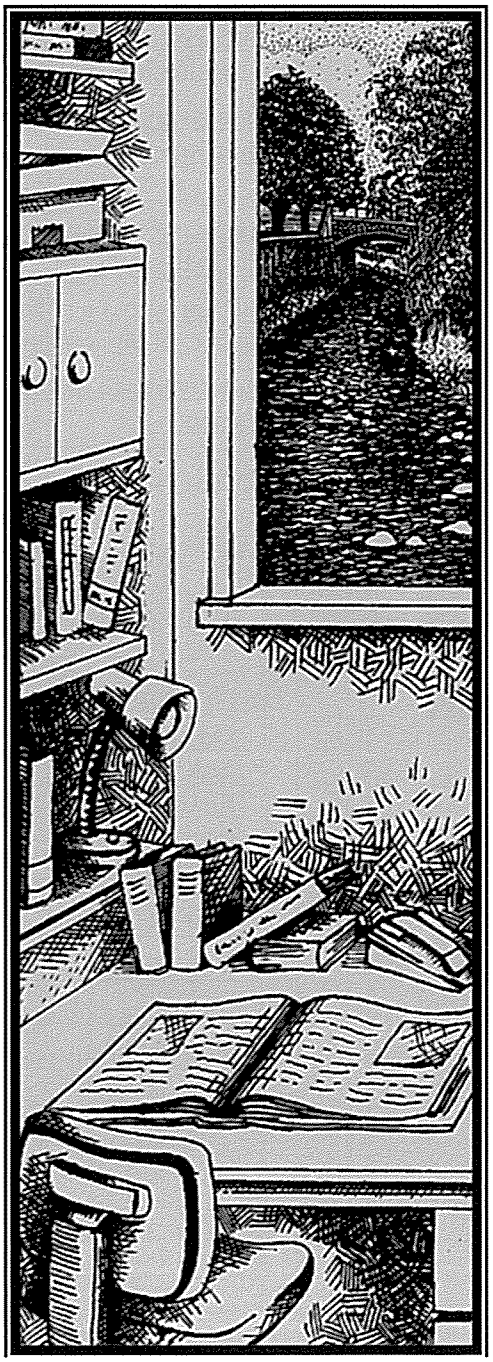
~~**16.3.3 The discharge of water or contaminants**~~

~~1. A description of the nature, method, volume, contents, rate and frequency of the proposed discharge.~~
~~2. A description of the treatment, if any, of the water or contaminant prior to the proposed discharge.~~
~~3. A description of any measures that may be in place to contain an emergency spill or discharge, should any occur.~~
~~4. An assessment of the ability of the receiving water or land to assimilate the discharge, in terms of both quantity and quality.~~
~~5. An assessment of the effects of the activity on:~~
~~(a) The natural and human use values set out in Schedule 1 for any affected water body; and~~
~~(b) The natural character of any affected water body; and~~
~~(c) The amenity values supported by any affected water body.~~
~~6. An assessment of the likely effect of the discharge on groundwater quality.~~
~~7. An assessment of the effect of the activity on any natural hazard, and the extent to which it is likely to create or exacerbate a natural hazard.~~
~~8. An assessment of the effects of the activity on heritage values, including those identified in Schedule 1C or in any district plan, any archaeological site, or any place with interim historic place registration.~~
~~9. In the case of stormwater or drainage water discharge:~~
~~(a) A description of the nature of activities served by the system; and~~
~~(b) Details of the design of the system, in particular its capacity, its specifications and its maintenance regime.~~
~~10. In the case of human sewage or animal waste discharge, details of the design of the system, in particular its capacity, its specifications and its maintenance regime.~~
~~11. In the case of pesticide or fertiliser discharge, details of any manufacturer's directions for handling or application.~~

16.3.4 to **16.3.13** *[no change]*

16.4 Provision of further information *[no change]*

Schedules



15 Schedule of characteristics and numerical standards for good quality water in Otago lakes and rivers

Table 15.1 Characteristics indicative of good quality water

Characteristic	Description	Contaminant effect
Clarity	When standing in knee-deep water, the bed is easily and clearly seen.	Sediment reduces the clarity of water, and has an adverse effect on aquatic habitats.
Colour	Water-colour is not altered by contamination. Some rivers have natural colour such as tannin-stain.	A change in colour can be indicative of contamination by sediment or organic matter, linked to potentially high concentrations of DRP, NNN, ammoniacal nitrogen or *E coli*.
Sediment	Riffles and runs are free of obvious clay and silt deposits. Walking across a riffle or run should not produce an obvious plume. Some rivers are naturally high in sediment.	Sediment affects the colour of water, and has an adverse effect on aquatic habitats, and can result in high concentrations of phosphorus, and allow *E coli* to persist.
Smell	Water is odourless.	Smell can be indicative of contamination from a source high in ammoniacal nitrogen or *E coli* or the decay of excessive amounts of algae which limits people's opportunity to appreciate water.
Algae	Healthy levels of algae: ▪ Do not cover more than 30% of the bed. ▪ Strands are less than 20 mm in length. ▪ No slime on the surface of the water.	Excessive nitrogen and phosphorus contribute to algal growth which has an adverse effect on native fish habitat, amenity and recreation values, and angling opportunities.
Bank appearance	Functioning riparian margins: ▪ Vegetation is healthy. ▪ Banks are stable. ▪ No obvious livestock disturbance.	Healthy riparian margins mitigate sediment and nutrient discharges.

Table 15.2 Receiving water numerical standards and catchment timeframes for achieving good quality water

The standards for Group 1, 2 and 3 are 5-year 80th percentile values when water flow is at or below median.

Table 15.2.1: Receiving Water Group 1

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	*Escherichia coli*	Turbidity
	0.444 mg/l	**0.026 mg/l**	**0.1 mg/l**	**260 cfu/100 ml**	**5 NTU**
Catlins	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2025
Carey's Creek	31 March 2012				
Kaikorai	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Leith	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Mokoreta (within Otago)	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Owaka	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Pomahaka, downstream of Glenken	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2025
Tahakopa	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2025
Tokomairiro	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Tuapeka	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waitahuna	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Waitati	31 March 2012	31 March 2012	31 March 2012	31 March 2025	31 March 2012
Waiwera	31 March 2025	31 March 2025	31 March 2012	31 March 2025	31 March 2012
Any unlisted tributary on the true right bank of the **Clutha/Mata-Au**, south of Judge Creek	31 March 2012				
Any unlisted tributary on the true left bank of the **Clutha/Mata-Au**, south of the Tuapeka catchment					
Any unlisted catchment that discharges to the **coast**, south of Taieri Mouth					

Table 15.2.2: Receiving Water Group 2

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	*Escherichia coli*	Turbidity
	0.075 mg/l	0.01 mg/l	0.1 mg/l	260 cfu/100 ml	5 NTU
Cardrona	31 March 2012				
Clutha/Mata-Au and any unlisted tributary (Luggate to mouth, including Lake Roxburgh, and excluding tributaries described in Group 1)	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2025
Fraser	31 March 2012				
Kakanui	31 March 2025	31March 2025	31 March 2012	31 March 2012	31 March 2012
Kawarau downstream of the Shotover confluence	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Lake Dunstan	31 March 2012				
Lindis	31March 2025	31March 2025	31 March 2012	31 March 2012	31 March 2012
Luggate	31 March 2012				
Manuherikia	31 March 2012	31 March 2025	31 March 2012	31 March 2012	31 March 2012
Mill Creek (tributary to Lake Hayes)	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Pomahaka, upstream of Glenken	31 March 2012				
Shag	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Shotover	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Taieri	31March 2025	31 March 2025	31 March 2012	31 March 2025	31March 2025
Trotters	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waianakarua	31 March 2025	31 March 2012	31 March 2012	31 March 2012	31 March 2012
Waikouaiti	31 March 2012				
Waipori					
Waitaki tributaries within Otago	31 March 2025	31March 2025	31 March 2012	31 March 2025	31 March 2012
Any unlisted catchment that discharges to the **coast**, north of Taieri Mouth	31 March 2012				

Table 15.2.3: Receiving Water Group 3

	Nitrate-nitrite nitrogen	Dissolved reactive phosphorus	Ammoniacal nitrogen	*Escherichia coli*	Turbidity
	0.03 mg/l	0.005 mg/l	0.01 mg/l	10 cfu/100 ml	3 NTU
Clutha/Mata-Au, above Luggate	31 March 2012				
Dart	31 March 2012	31 March 2012	31 March 2012	31 March 2012	Exempt
Kawarau, upstream of the Shotover confluence	31 March 2012				
Matukituki	31 March 2025	31 March 2012	31 March 2012	31March 2025	Exempt
Tributaries to Lakes Hawea, Wakatipu, & Wanaka	31 March 2012				

The standards for Groups 4 and 5 are 5-year 80th percentile values at all times.

Table 15.2.4: Receiving Water Group 4

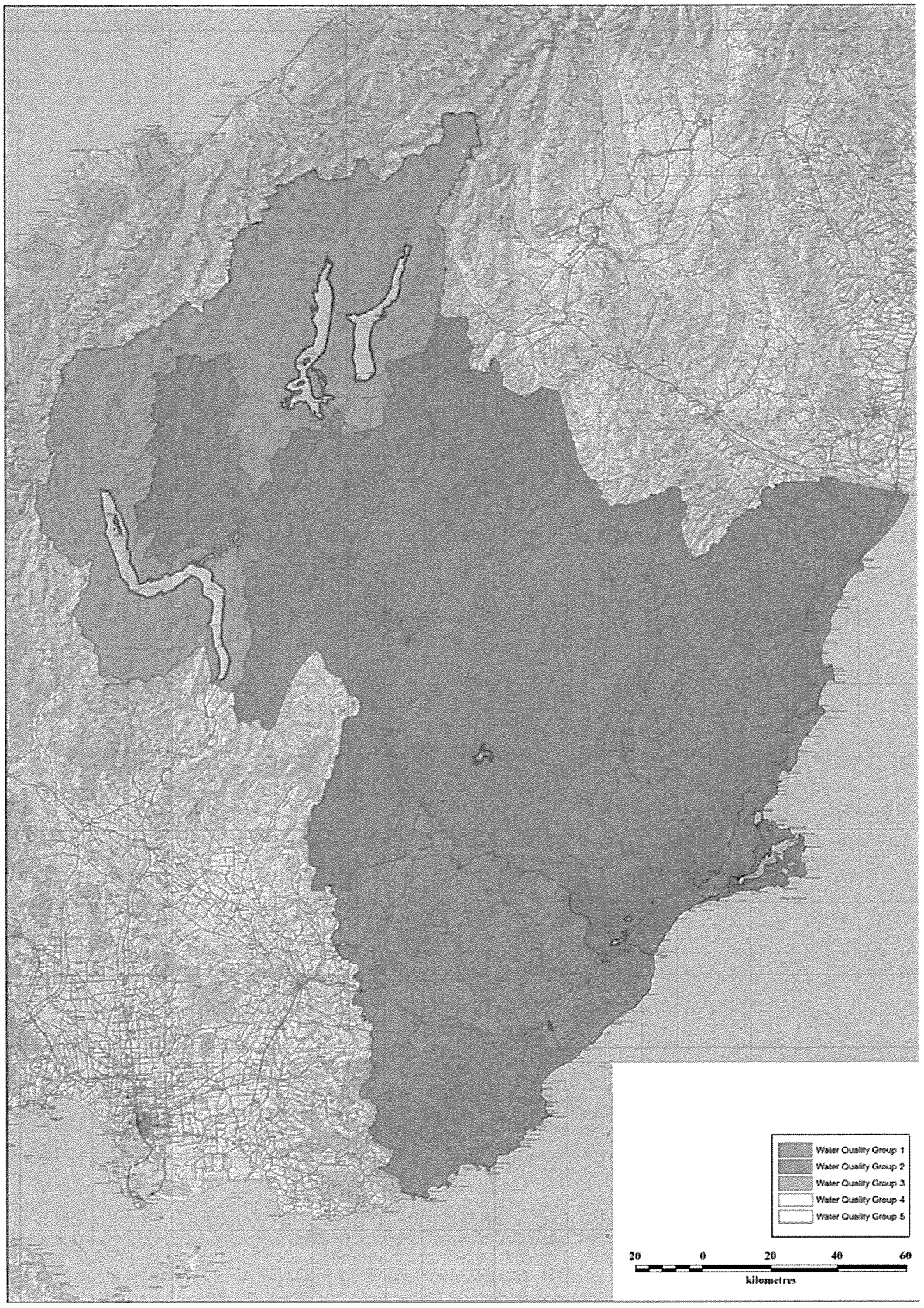
	Total nitrogen	Total phosphorus	Ammoniacal nitrogen	*Escherichia coli*	Turbidity
	0.55 mg/l	0.033 mg/l	0.1 mg/l	126 cfu/100 ml	5 NTU
Lake Hayes	31 March 2012	31March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Johnson	31March 2025	31March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Onslow	31 March 2012	31March 2025	31 March 2012	31 March 2012	31March 2025
Lake Tuakitoto	31March 2025	31March 2025	31 March 2012	31 March 2025	31March 2025
Lake Waipori & Waihola	31March 2025	31March 2025	31 March 2012	31 March 2012	31March 2025

Table 15.2.5: Receiving Water Group 5

	Total Nitrogen	Total Phosphorus	Ammoniacal nitrogen	*Escherichia coli*[3]	Turbidity
	0.1 mg/l	0.005mg/l	0.01 mg/l	10 cfu/100 ml	3 NTU
Lake Hawea	31 March 2012				
Lake Wakatipu	31 March 2012	31March 2025	31 March 2012	31 March 2012	31 March 2012
Lake Wanaka	31 March 2012				

mg/l = milligrams per litre
cfu/100 ml = colony-forming units per 100 millilitres
NTU = nephelometric turbidity units

Map 15.1 Receiving Water Groups



Schedule 16 Schedule of discharge limits for water quality

Schedule 16 describes the contaminant concentration limits that are applicable to discharges to the lakes, rivers, wetlands and drains or races flowing to the lakes, rivers or wetlands, in the catchments of each discharge limit area. Discharge Limit Areas 1 and 2 catchments are shown on the J-series Maps. Discharges of contaminants described in this Schedule are permitted under Rule 12.C.1.1(d)(1) as long as the concentration limits are not exceeded when, at the representative monitoring site, the water flow is at or below reference flow.

16A Discharge limits for water quality by discharge limit area

Discharge Limit Area 1 Catchments	**Nitrate-nitrite nitrogen**	**Dissolved reactive phosphorus**	**Ammoniacal nitrogen**	***Escherichia coli***
Timeframe	1 April 2020			
▪ **Catlins** ▪ **Carey's Creek** ▪ **Kaikorai** ▪ **Leith** ▪ **Mokoreta** (within Otago) ▪ **Owaka** ▪ **Pomahaka**, downstream of Glenken ▪ **Tahakopa** ▪ **Tokomairiro** ▪ **Tuapeka** ▪ **Waitahuna** ▪ **Waitati** ▪ **Waiwera** ▪ Any unlisted tributary on the true right bank of the **Clutha/Mata-Au**, south of Judge Creek ▪ Any unlisted tributary on the true left bank of the **Clutha/Mata-Au**, south of the Tuapeka ▪ Any unlisted catchment that discharges to the **coast**, south of Taieri Mouth	3.6 mg/l	0.045 mg/l	0.2 mg/l	550 cfu/100 ml

Discharge Limit Area 2 Catchments	**Nitrate-nitrite nitrogen**	**Dissolved reactive phosphorus**	**Ammoniacal nitrogen**	***Escherichia coli***
Timeframe	1 April 2020			
▪ **Cardrona** ▪ **Clutha/Mata-Au** (above Luggate) ▪ **Clutha/Mata-Au** and any unlisted tributary (Luggate to mouth, including Lake Roxburgh, and excluding tributaries described in Discharge Limit Catchment Area 1) ▪ **Fraser** ▪ **Kakanui** ▪ **Kawarau** ▪ **Lake Dunstan** ▪ **Lake Hayes** ▪ **Lake Hawea** and any tributary ▪ **Lake Johnson** ▪ **Lake Onslow** ▪ **Lake Tuakitoto** ▪ **Lake Waipori & Waihola** ▪ **Lake Wakatipu** and any tributary ▪ **Lake Wanaka** and any tributary ▪ **Lindis** ▪ **Luggate** ▪ **Manuherikia** ▪ **Mill Creek** (tributary to Lake Hayes) ▪ **Pomahaka**, upstream of Glenken ▪ **Shag** ▪ **Shotover** ▪ **Taieri** ▪ **Trotters** ▪ **Waianakarua** ▪ **Waikouaiti** ▪ **Waipori** ▪ **Waitaki** tributaries within Otago ▪ Any unlisted catchment that discharges to the **coast**, north Taieri Mouth	1.0 mg/l	0.035 mg/l	0.2 mg/l	550 cfu/100 ml

mg/l = milligrams per litre
cfu/100 ml = colony-forming units per 100 millilitres

16B Representative flow monitoring sites and reference flows

Map 16B Representative flow monitoring sites for every part of Otago

Representative flow monitoring sites are shown on the Water Info website (http://water.orc.govt.nz/WaterInfo/Default.aspx).

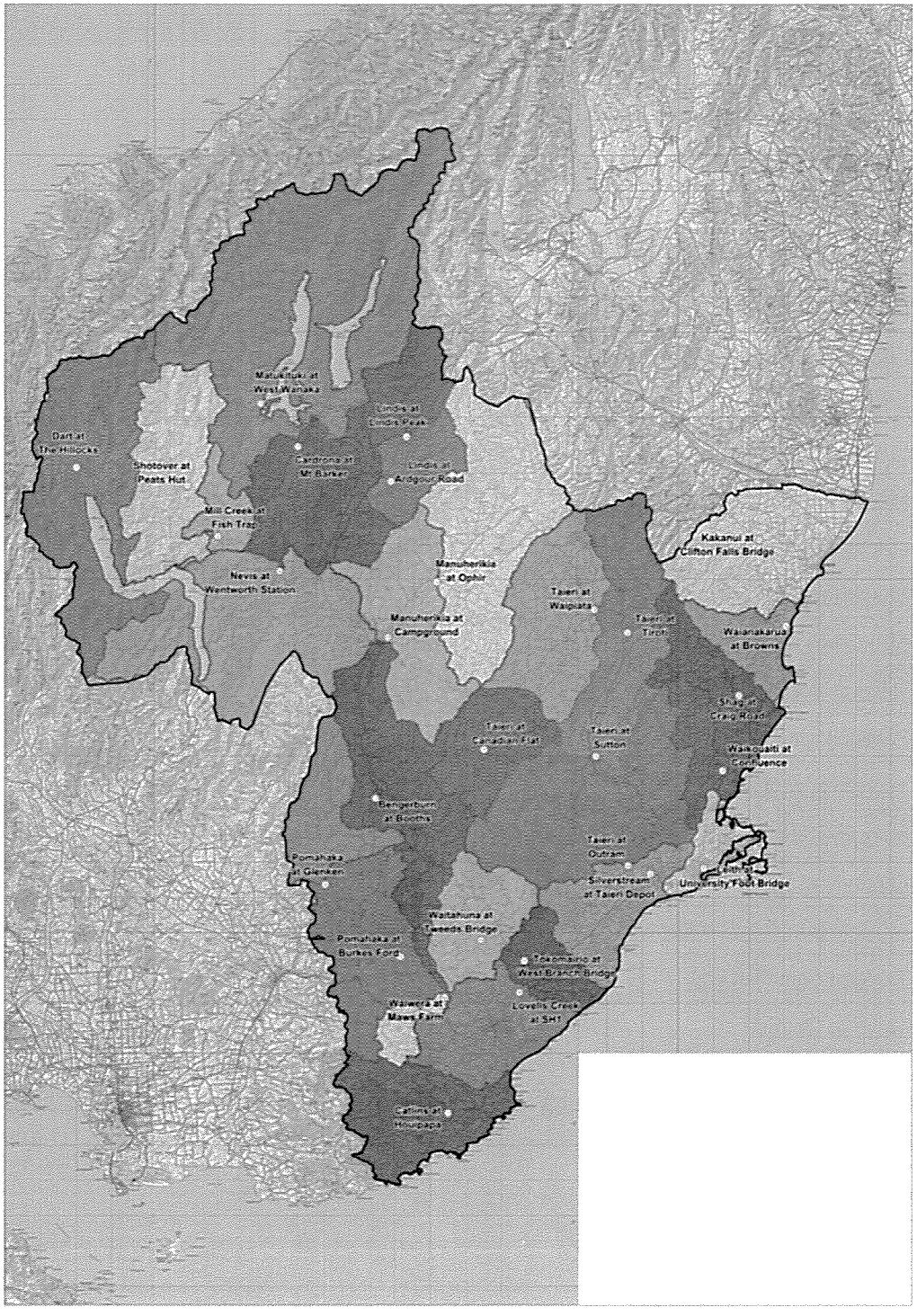


Table 16B Reference flows at each representative flow monitoring site

Reference flows are fixed and have been calculated using median flow data from 01/01/2007 to 01/01/2013.
River flows for Otago are available on the Water Info website (http://water.orc.govt.nz/WaterInfo/Default.aspx).

Monitoring Flow Site	Reference flow (cumecs)
Bengerburn at Booths	0.37
Cardrona at Mt Barker	1.95
Catlins at Houipapa	2.34
Dart at The Hillocks	51.49
Kakanui at Clifton Falls Bridge	1.29
Leith at University Foot Bridge	0.34
Lindis at Ardgour Road	3.50
Lindis at Lindis Peak	3.51
Lovells Creek at SH1	0.14
Manuherikia at Campground	11.60
Manuherikia at Ophir	8.01
Matukituki at West Wanaka	44.99
Mill Creek at Fish Trap	0.35
Nevis at Wentworth Station	7.25
Pomahaka at Burkes Ford	15.48
Pomahaka at Glenken	7.00
Shag at Craig Road	0.65
Shotover at Peats	18.12
Silverstream at Taieri Depot	0.30
Taieri at Canadian Flat	2.45
Taieri at Outram	15.86
Taieri at Sutton	10.52
Taieri at Tiroiti	7.88
Taieri at Waipiata	6.02
Tokomairiro at West Branch Bridge	0.44
Waianakarua at Browns	0.78
Waikouaiti at Confluence	1.34
Waitahuna at Tweeds Bridge	1.55

Monitoring Flow Site	Reference flow (cumecs)
Waiwera at Maws Farm	1.58

Glossary

Add the following definitions to the glossary:

Animal waste system	Includes collection, storage, treatment, disposal or application of liquid or solid animal waste.

Amend the following definition in the glossary:

Fertiliser	Any proprietary substance specifically manufactured for use in increasing the nutrient status of land. Excludes compost, effluent or seaweed.

Regional Plan: Water for Otago

Maps