

RMA Section 32 Report on Proposed Change to the permitted on-site sewage effluent discharge to land rule – September 2010

Section 32 of the Resource Management Act 1991 (RMA) requires an evaluation of the objectives, policies, rules and other methods in a proposed regional plan before it is publicly notified for submissions. This report is the Section 32 evaluation of the Proposed Change to the permitted on-site sewage effluent discharge to land rule.

Background

A review of the permitted on-site sewage effluent discharge to land rule (Rule 6) has come about as a result of Council's decision to merge the Discharge to Land, Land and Riverbed, and Water Management Plans into one plan. The Discharge to Land Plan was made operative seven years ago, so in terms of RMA plan timeframes the 10 year review is due in 2012. On-site sewage effluent discharges to land are one of the most common discharges to land, and standards, technology and knowledge have changed somewhat since the rule became operative.

As a result of reviewing Rule 6 (proposed to be renumbered Rule 77), minor consequential changes are also proposed to the permitted rules for pit toilets and groundwater takes from bores and wells. A copy of the proposed changes with new rule numbers are attached at the end of this report.

Section 32 Tests

The following is an assessment of the RMA Section 32 requirements.

Section 32(3)(a): Are the objectives the most appropriate way to achieve the purpose of the Act?
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This is not applicable as no new objectives are considered necessary as part of this plan change. The existing objective is sufficient, and the proposed changes to the rule are in keeping with Objective 13.2.1 of the Proposed Regional Land and Water Plan.

S32(3)(b): Are the policies, rules, or other methods the most appropriate (with respect to efficiency and effectiveness) for achieving the objectives?

The proposed changes to Rule 77 will make it more efficient and effective. The new requirement is for all existing and new systems to meet the one set of conditions rather than having a separate set of conditions for existing or older systems. There are likely to be a number of older systems installed before 1998 which won't meet the setback distances from water bodies and technically need consent, but are not contaminating water. To avoid unnecessarily requiring these systems to get consent, pre-1998 systems are excluded from meeting condition b).

Other changes clarify conditions that have been confusing or unclear to implement, make setback distances consistent with other relevant rules, are more specific for soil and climate conditions on the West Coast, and reflect good practice approaches taken to deal with current issues, as well as changes to the NZ Standard. The setback distances from groundwater and drains fill previous gaps where there were no setbacks in the rule. Condition c) is no longer relevant as this is now built into septic tank design, and greywater shouldn't be retained for 24 hours. Specific conditions for greywater discharges also fill a gap that was previously not addressed in the Plan.

The reduced setback distance for treated sewage effluent discharges from bores or wells used for potable water supplies takes into account the groundwater table, generally more permeable aquifers on the West Coast, and the high rainfall which results in faster water

movement and less opportunity for adverse effects on water quality. 50 metres appears to be a sufficient distance to avoid contamination, and is the same setback distance used by Taranaki and Southland Regional Councils, which have similar rainfall and climate to the West Coast. The same reduced setback distance is made for pit toilets from potable wells for consistency, with a qualifier which recognises the new National Environmental Standard for drinking water which requires no adverse effects on potable supplies. (The qualifier is consistent with new conditions added to herbicide discharges to water, for no adverse effects on potable water supplies.)

The Note added to Rules 41 and 42 explains the different setback distances between sewage effluent discharges and wells in Rules 41 and 42, and Rule 77. The 20m setback in Rules 41 and 42 applies unless the well is for potable use, then the greater separation distance is required under Rule 77. This makes the setback distances for sewage discharges and water takes from bores consistent while still achieving the Plan objectives.

The proposed changes will make the rules more effective for meeting Objective 13.2.1 and ensuring adverse effects of discharges are avoided, remedied, or mitigated.

S32(4)(a): What are the benefits and costs of the policies, rules or other methods?

The main benefits of the changes to the rules will be more standardised assessment of effects of discharges, and better environmental outcomes. The changes will make it clearer to people building a new dwelling and installing a sewage effluent system what the requirements are for meeting the permitted rules. For example, the hydraulic loading rates in the NZ Standard involve a complicated ranking of factors to assess if a site has suitable soakage for a proposed system, however inconsistencies can occur with this assessment. It would be more consistent and straightforward to explicitly include a condition permitting loading rates for the three soil categories that are known to have good soakage. A consent will be required for a new discharge proposed in a Category 4-6 soil with a clay component and poorer soakage. This will give more certainty that systems in Category 1-3 soils will have no more than minor effects.

There should not be any substantial additional costs of having to comply with the changed conditions of Rule 77. Having one set of conditions for new and existing systems should not require a lot of upgrades or retrospective consents, as the current conditions for pre-1998 systems require "no contamination of water", which is the same outcome as what the new conditions are aiming for. If existing discharges aren't causing contamination of water, then they comply with section 15(2) of the RMA, which permits discharge of contaminants into or onto land unless controlled by a rule in a plan. Any existing systems that are causing contamination of water will need to be upgraded as this is not permitted by the rule as per section 15(1), so they are no more adversely affected by the new rule.

There are a number of existing discharges into clay soils in the Buller and Grey Districts which have been approved as meeting the current permitted rule because they are required by Councils to use an advanced or engineer-designed treatment and disposal system. Under the new condition c), they technically need retrospective consent, however it is likely that the risk of effects is low, and so a retrospective consent would not be warranted. If there is no contamination of water then there is no issue as they would be permitted as of right under section 15(2) of the RMA, and they have met the current permitted rule. There is not a big difference in the current and new conditions, as most of them are in the NZ Standard and systems installed since the standards came into effect in 2000 have been required to meet them.

S32(4)(b): What is the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods?

Council staff have kept records of assessments of proposed sewage effluent discharges to check they comply with the current discharge rule. Based on this information, there appears to be no significant adverse environmental effects occurring on a regional scale from the current rule, to signal serious problems with it. Localised problems have occurred in several small settlements (Rapahoe, Inangahua, Orowaiti, Hector, Taylorville) due to multiple failure of old systems installed before the rule came into effect. Additionally, the Regional Council has received only a small number of complaints about odour and discharges from sewage effluent systems over the last seven years, and these have been addressed by maintenance or upgrading.

If the proposed changes are not adopted, the status quo would continue under the current rule. While this may not be significantly problematic, it creates some uncertainty about the potential future effects of discharges in soils with less suitable soakage, or on sites that may have a hazard risk. In some areas the good soils have been built on and development is spreading into areas with poorer soils. Since sea level rise is a confirmed phenomena, and climate change predictions are for more intense rainfall and storm events, the proposed changes will enable potential adverse effects to be better managed in the future.

Proposed Change to the permitted on-site sewage effluent discharge to land rule

Rule

7 On-site discharge of sewage effluent

7.

The discharge of any sewage effluent into or onto land, other than septage, from on-site sewage treatment and disposal systems is a **permitted activity**, provided that **all of** the following conditions are met:

- a) the discharge does not exceed:
 - i) a maximum of 2000L per day for secondary treatment systems;
 - ii) a maximum of 14,000L per week for other systems;
 - iii) a maximum of 1.3 cubic metres of greywater per day;
~~2000 litres per day (calculated as a weekly average);~~
- b) the discharge is not within:
 - o 50m of any surface water body;
 - o 50m of any coastal water;
 - o ~~100m~~ 50m of any bore or well used for potable water supply;
 - o 20m of any drain;
 - o 1 metre of the groundwater table; and
unless the system was installed before 1998 and is not contaminating water;
- c) For systems other than soak pits, the hydraulic design loading rates for a disposal field shall not exceed those recommended for Category 1-3 soils in AS/NZS1547:2000 'On-site Domestic Waste Water Management', unless the system was installed before 1998 and is not contaminating water;
- d) the greywater discharge is not within:
 - o 20m of any surface water body;
 - o 20m of any coastal water;
 - o 20m of any bore or well used for potable water supply;
 - o 0.6m of the groundwater table;
- e) ~~the system is designed with a minimum of 24 hours retention time;~~
- d) there is no ponding, ~~flooding~~, runoff, or surface breakout;
- e) no stormwater enters the system;
- f) the discharge does not pose a risk to human health, and is not noxious, dangerous, offensive or objectionable to such an extent that it has or is likely to have an adverse effect on the environment;
- g) for systems which ~~discharge into land~~ use a disposal field, the system is designed to provide for even distribution of effluent to the entire filtration surface ~~of the disposal field;~~
- h) for systems which discharge *onto* land:
 - The discharge is not by way of spray irrigation, or otherwise produces any aerosol discharge to air;
 - The effluent is evenly distributed over the entire area of the disposal field;
 - The effluent conforms to the following standard:
 - BOD5 not greater than ~~70~~ 20mg/litre;
 - Suspended solids not greater than 30 mg/litre;
 - Faecal coliforms not more than 1000/100 mls.

Notes:

1. Discharges from pit privies are covered under Rule 7.

- 1) The volumes stated in condition a) are equivalent to the amount of effluent produced by approximately 10 people.
- 2) For condition b), the setback distance from the groundwater table should be based on the maximum water table level of the groundwater.
- 3) ~~2.~~ The Regional Council will accept as compliance with condition (f) an on-site sewage treatment and disposal system designed, constructed, operated and maintained in accordance with The

New Zealand Manual of Alternative Wastewater Treatment and Disposal Systems, Volume II, Part A: On-Site Wastewater Disposal From Households and Institutions Technical Publication No 58, Second-~~Third~~ Edition (Gunn, 1994 ~~2004~~), AS/NZS1546 2008, Parts 1, 2 and 3 'On-site Domestic Waste Water Treatment Units', or AS/NZS1547:2000 'On-site Domestic Waste Water Management'.

- 4) ~~3-~~ Condition (g) refers to both gravity-fed and dosed loading systems.
- 5) When selecting a discharge site, it should be considered whether the site for the system is subject to slippage, subsidence, erosion or inundation from any source.
- 6) For systems which discharge onto land, the standards required in condition g) apply to the discharge at the outlet of the treatment plant, prior to discharging onto land.

Proposed Change to Rule 78, condition b) ii)

Rule 7 Discharge from pit toilets 8.

The discharge of any sewage into or onto land, other than septage, from pit toilets or long-drop toilets is a **permitted activity**, provided that all of the following conditions are met:

- a) The discharge does not exceed 400 litres per day (calculated as a weekly average);
- b) The toilet is not sited within:
 - i) 50m of any surface water body or coastal water;
 - ii) 50m ~~100m~~ horizontally of any bore or well used for potable water supply, and there are no adverse effects on any take of water for human consumption;
- c) No stormwater or runoff enters the system;
- d) Effluent from the toilet does not enter any surface water body or coastal water;
- e) Waste in the toilet does not accumulate to closer than 30cm to the ground surface;
- f) The discharge does not pose a risk to human health, and is not noxious, dangerous, offensive or objectionable to such an extent that it has or is likely to have an adverse effect on the environment.

Proposed Change to add a Note to Rules 41 and 42

Rule 41. Take and use of groundwater

The taking and use of groundwater is a **permitted activity** if all the following conditions are met:

- (a) The total take does not exceed 2 litres per second, up to a maximum volume of 50,000 litres per day;
- (b) Any well shall be located not less than 20 metres from any adjacent well or the Coastal Marine Area and from any septic tank disposal field or effluent treatment ponds or silage storage areas;
- (c) Any bore shall be located not less than 200 metres from any adjacent bore;
- (d) No existing lawful take of water is adversely affected as a result of the taking; and
- (e) The council is informed in writing of the location, expected rate and frequency of the take prior to the take occurring and contact details of the person taking; and
- (f) The bore or well casing and headworks prevent:
 - (i) The infiltration of contaminants;
 - (ii) The uncontrolled discharge or leakage of water to the surface and between aquifers.

Notes: For the purposes of Rule 41 a well is defined as being less than 20 metres deep as measured from ground level, while a bore is defined as being greater than 20 metres deep as measured from ground level.

The Council has best practice information available on the materials and construction of wells and bores to prevent contamination. The Council will from time to time monitor and verify the location, frequency and rate of take as appropriate.

Note: The 20m setback from septic tank disposal fields applies unless the bore or well is for potable use, then a greater separation distance is required under Rule 77 for permitted on-site sewage effluent discharges to land.

Rule 42. Bore development and pumping tests

The taking and use of groundwater for bore development and pumping tests is a **permitted activity** if all the following conditions are met:

- (a) Any well shall be located not less than 20 metres from any adjacent well or the Coastal Marine Area or from any septic tank disposal field or effluent treatment ponds or silage storage areas;
- (b) Any bore shall be located not less than 200 metres from any adjacent bore;
- (c) No existing lawful take of water is adversely affected as a result of the taking.

Note: The 20m setback from septic tank disposal fields applies unless the bore or well is for potable use, then a greater separation distance is required under Rule 77 for permitted on-site sewage effluent discharges to land.