

An everyday guide to ...



Private Water Supplies



HURUNUI
District Council

Where a private water source is promoted as part of a subdivision application to meet the Council's requirements for the supply of potable water, conditions as follows are imposed on the resource consent approval.

Conditions

Potable Water Supply

- 1 *The consent holder shall establish a water supply on each lot on the plan of subdivision that is sustainable and able to be made potable.*
- 2 *Where it is proposed to establish a water supply on any lot required by [condition 1] of this consent that is not provided from a Hurunui District Council water supply scheme then it must meet the following requirements:*
 - *The source must have a minimum sustainable yield of at least 900 litres per day for each lot supplied.*
 - *The supply must be able to comply on a continuing basis with the guide line values for priority 1 and priority 2 health and aesthetic determinands specified in the current "Drinking Water Standards for New Zealand"*
- 3 *In meeting [condition 2] of this consent a report from an independent and suitably qualified person(s) must be submitted and approved by the Council which provides a full description of the proposed water supply in accordance with the reporting standards in "An Everyday Guide to Private Water Supplies", a copy of which is attached to this decision. Where treatment of the supply is required the report must identify how the water can be treated to meet the guide line values for priority 1 and priority 2 health and aesthetic determinands.*
 - (a) *A report submitted to the Council under this condition may be audited by a Council appointed hydrologist prior to the issue of a Section 224 (c) certificate. The cost of this audit will be charged to the applicant.*
 - (b) *The water supply must be monitored for both priority 1 and priority 2 health and aesthetic determinands by the consent holder at monthly intervals for at least three months, prior to issue of the 224 certificate.*
 - (c) *Where the water supply meets the criteria for a Community Drinking Water Supply as determined in the DWSNZ, the supply shall be registered with the Ministry of Health. A Public Health*

Risk Management Plan (PHRMP) for any Community Drinking Water Supply shall be prepared by the applicant and approved by a qualified and approved Water Assessor, evidence of the registration and a copy of the PHRMP shall be provided to the Council prior to issue of the 224 certificate and the monitoring shall be as required by the Ministry of Health.

Notes:

- I. Samples from the water source shall be tested only in an IANZ registered laboratory and shall be taken either by the laboratory carrying out the analysis, Council staff, or a suitably qualified person acceptable to the Council.*
 - II. If anyone other than Council staff collects the sample, written verification shall be provided to the Council stating the time of sampling that the sample was in a raw condition and was from the well under test.*
- (c) If the report submitted under this condition identifies that “at-source” treatment is required, the treatment option must be installed, and at least three consecutive clear samples taken at monthly intervals obtained prior to the issue of the Section 224 certificate.*
- 4 Easements shall be created to protect the water supply where the source or a supply tank is not located on the lot it supplies. Easement documentation shall detail the apportionment of costs to future users for maintenance and operating costs of the water supply, and the right to draw and convey a minimum of 900 litres of water per day. A copy of the easement documentation is to be provided to the Council prior to the issue of a section 224 Certificate.*

Water Supply – Ongoing

- 5 Where it is identified by the report submitted under [condition 3] of this consent that the water supply established by [conditions 1 & 2] of this consent – RCXXXXXX requires treatment, a treatment system must be installed by the lot owner and maintained on the lot from the time it is used for human consumption, which will ensure that the water supply meets the requirements of the Drinking Water Standards New Zealand on an ongoing basis.*
- 6 The water supply must be monitored on an annual basis by the lot owner for both priority 1 and priority 2 health and aesthetic*

determinands to the standards set out in the Drinking Water Standards New Zealand (current at the time of testing). The owners of each lot shall be responsible for the monitoring required under this condition and shall incur all costs.

- 7 *In the event of the water supply to any of the lots not complying with the standards approved by the conditions of this consent, being:*
- o *The source must have a minimum sustainable yield of at least 900 litres per day for each lot supplied; and*
 - o *The supply must be able to comply on a continuing basis with the guide line values for priority 1 and priority 2 health and aesthetic determinands specified in the current “Drinking Water Standards for New Zealand”,*
the owners of the lots supplied shall be responsible for the upgrading and ongoing maintenance of the water supply to meet the standards. All costs associated with such upgrading or maintenance are to be at the lot owners’ expense.
- 8 *[Conditions 5 – 7] shall be secured by consent notice registered on each certificate of title on the plan of subdivision.*

Advice Notes

A resource consent for water abstraction may be required from the Canterbury Regional Council.

Any tanks used for the storage of water for the domestic water supply shall have insect proof lids and overflow vents. Storage tanks shall be water tight with no evidence of water leaks from the tank or associated connections

Condition 3 of the resource consent notice of decision calls for a report confirming the availability of a suitable water supply. This report must contain a minimum level of information listed below and follow the general format in order to meet the requirements of Condition 3. Please note that this is a guide only a reference should also be made to the Drinking Water Standards New Zealand.

Report

1. Location of Property

Include a location map (not just verbal description) with the following minimum criteria:

- Property boundaries
- Well location
- Septic tank location
- Scale and north point
- Labeled roads, rivers, streams, drains, etc.

2. Intended Use of Water

- The intended use of the water e.g. domestic supply
- The required water demand (litres/day)
- The required water quality e.g. potable.

3. Description and Assessment of Proposed Water Source

This description must include the following information. This information will vary depending on the type of supply, a list for both groundwater and surface water supplies has therefore been provided.

(Note: A water supply obtained from a gallery located next to a river should be evaluated against criteria for both ground and surface water).

3.1 Groundwater Supply Assessment

(a) Description of well, including:

- Location of well on property (Map)
- Depth of well (m)
- Diameter of well (mm)
- Water Level (m below ground level)
- Screen size and setting (e.g., between 6 and 9m below ground level)
- Bore log showing geological detail
- Details of well head construction and security
- Measures to prevent contaminated water entering the well

(b) Description of hydro geology in the area including:

- A description of water bearing aquifers
- A description of possible confining layers near the surface that may protect the aquifers from contamination
- A description of soils on the site
- The groundwater gradient and flow direction
- Typical groundwater levels in the area including likely maximum and minimum water levels
- A map and/or list of other water supply wells in the area

Note: Much of this information can be obtained from Environment Canterbury

(c) An assessment of groundwater availability, including:

- A description and the results of a pumping test to confirm availability of groundwater. This is to include pumping rate, duration, drawdown measured at end of pumping period and time for water level to recover to the initial level
- An assessment of pumping test data
- Conclusion as to sustained yield of well
- An assessment of groundwater level variations on well yield
- Confirmation of permission to take water from groundwater. This could be either a letter from Environment Canterbury that the proposed take conforms to the

requirements of the General Authorisation or a resource consent to take groundwater issued by the Environment Canterbury.

- (d) An assessment of the water quality of the supply – including:
- A description of measured well water quality. The water quality determinants tested for must include the Priority 1 and Priority 2 determinants as described in "Drinking Water Standards for New Zealand" (DWSNZ). Selection of determinants should be based on an assessment of contaminants potentially present in the water. In most locations in Hurunui District, testing groundwater for the following determinants should satisfy the priority 1 and 2 requirements.

Faecal Coliforms – A minimum of three consecutive clear samples taken over approximately three months.

PH
Nitrate –N
Nitrite –N
Iron
Manganese
Turbidity
Conductivity
Total Hardness

- A description of the sampling and testing methodology, including:
 - o Water extraction method
 - o Type of container
 - o Storage and transportation of sample
 - o Time between sampling and testing
 - o Confirmation that the appropriate protocols have been followed.
- Description of possible sources of groundwater contamination. This could include:
 - o Land use within 1km up gradient of the well
 - o Locations of existing and possible future septic tanks

- Any consents to discharge to ground within 1 km of the well
 - Landfills
 - Contaminated sites
 - Industrial sites
 - Flooding
- (e) Either confirmation that the water supply meets the DWSNZ standards, now and in the foreseeable future, or a statement as to a recommended treatment system to be installed. If a treatment system is required, a description of the operational requirements should be included.

3.2 Surface Water Supply Assessment

(a) Description of water source, including:

- Location on property (Map)
- Method of water abstraction (e.g. weir/pump/gallery)
- Details of abstraction point structure and security
- River/Stream/ spring flow rate (measured)
- Measures to prevent contaminated water entering the supply

(b) An assessment of surface water availability, including:

- An assessment of the reliability of the river/stream/spring flow. This should include any long term flow data and any flow records available at the Environment Canterbury.
- An assessment of the estimated minimum flow rate anticipated in the source.
- Confirmation of permission to take water. This could be either a letter from Environment Canterbury that the proposed take conforms to the requirements of the General Authorisation or resource consent to take surface water issued by the Environment Canterbury.

(c) An assessment of the water quality of the supply

In the case of a surface water supply even if water quality tests show the water to be of potable quality, the supply should be treated to ensure reliability of quality. This reflects the lack of water quality security of surface water sources. The water quality assessment should therefore be based on assessing the treatment requirement of the source.

- A description of water quality measured in the source. In most locations in Hurunui District testing surface water for the following determinants should satisfy the requirements for assessing treatability.

pH

Turbidity/Suspended Solids

Conductivity

Total Hardness

Nitrate –N

Any other determinants potentially in the water source due

to upstream activities

- A description of the sampling and testing methodology, including:
 - o Water extraction method
 - o Type of container
 - o Storage and transportation of sample
 - o Time between sampling and testing
 - o Confirmation that the appropriate protocols have been followed

 - A description of possible sources of groundwater contamination and expected variability of quality. This could include:
 - o Expected turbidity/suspended solids concentrations during floods
 - o Landuse within the catchment upgradient of the abstraction point
 - o Any consents to discharge to water upstream of the abstraction point
 - o Landfills
 - o Contaminated sites
 - o Industrial sites
- (d) A statement as to a recommended treatment system to be installed, its ability to treat the water to the required standards and a description of the operational requirements of the treatment system.

Conclusion and Recommendation

This should contain a clear statement from the person undertaking the investigation that the water supply system as described is capable of meeting the requirement of supplying at least the required quantity of water of potable standard now and in the foreseeable future.

Or

A clear statement confirming that if the recommended treatment system is installed and operated correctly the water supply system will be capable of meeting the requirement of supplying at least the required quantity of water of potable standard now and in the foreseeable future.

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