

Part B

Assessment of Environmental Effects –

Take or Use Groundwater



Caring for Northland and its Environment

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This application is made under Section 88/Section 127 of the Resource Management Act 1991

To: The Secretary
Northland Regional Council
Private Bag 9021
Whangarei 0120

PART B – ASSESSMENT OF ENVIRONMENTAL EFFECTS

Your application must include an Assessment of Effects on the Environment. This form is a guide to help you prepare it.

An assessment of effects is required so that you and others can understand what happens to the environment when you take water from a water body (eg. river, stream, lake and groundwater resource). This will help you to propose ways to minimise those effects to the Regional Council's satisfaction.

The degree of detail required is in proportion to the scale of the environmental effects of your proposal. If the size of your proposed activity or the scale of its potential effects is significant, a report by a professional advisor in support of your application may be required.

Please note that the word "environment" includes the surrounding coastal water, adjoining land, any surrounding resource users, and local iwi.

It is advised that you make an appointment with an appropriate Council Officer to discuss your application prior to lodging it. This will help you supply all the required information at the onset and ensure the efficient processing of your application.

A. Description of the Proposed Activity

A.1 Do you propose to:

take water from an existing bore?

Yes

No

take water from a new bore?

Yes

No

If you propose to drill a new bore, please contact the Regional Council. You may need to apply for a Resource Consent to drill the bore (Make, Alter or Install a Bore).

A.2 Details of the bore(s) from which taking is proposed.

Northland Regional Council Bore Number (if known)	Depth (m)	Diameter (mm)	Depth to Top of Screen (m)	Depth at which Submersible or Surface Pump is Mounted

A.3 What quantity of water do you propose to take? _____ m³ per day
 _____ m³ per year

A.4 How have you calculated the amount of water that you propose to take? *(attach separate sheet if required)*

A.5 Provide information to justify the quantity of water applied for *(see attached "Information Requirements" booklet)*

A.6 How many hours per day is water to be taken? _____ (typical) _____ (max)

A.7 What is the pump type and model? _____

A.8 At what rate is water to be taken? _____ litres per second

A.9 Is there a water meter fitted to measure the amount of water taken? Yes No

A.10 Which months do you expect to take water? *(tick appropriate boxes)*

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Usually												
Sometimes												

A.11 During what part of the day will you typically be taking water?

- During the daytime During the night
 24 hours "On demand"

A.12 What will the water be used for? (tick appropriate box and answer those questions)

Pasture Irrigation

How many hectares of pasture will be irrigated? _____ ha
 What type of irrigation system will be used? (ie. trickle or spray) _____
 How many hectares will be irrigated on any one day of the irrigation rotation? _____ ha
 How many days between irrigating the same block of land? _____ days

Horticultural Irrigation

What is the total area to be irrigated? _____ ha
 If glass/plastic houses are used, how many square metres? _____ m²
 What types of crop will be irrigated?
 Avocados _____ ha
 Citrus _____ ha
 Kiwifruit _____ ha
 Pip fruit _____ ha
 Stone fruit _____ ha
 Market garden _____ ha
 Flowers _____ ha
 Nursery _____ ha
 Other (specify): _____ ha

What type of irrigation system will be used?

- Trickle
- Sprinkler
- Other (specify): _____

Industrial Use

What type of industry/process will be using the water? _____

Private Water Supply

What type of institution uses the water?
 Households: number of houses supplied _____
 Campground: maximum number of visitors _____
 School: number of students and staff _____
 Other (specify): _____

Public Water Supply

What population is served by the supply? _____

Stock

What type and how much stock will be supplied with water?
 Dairy cows _____
 Beef cattle _____
 Sheep _____
 Other (specify): _____

B. Site Details

B.1 You **must** attach a map that shows the following:

- the location of the proposed take bore
- the legal boundaries of the property
- the location of any springs, wetlands and surface water resources (including coastal water) within 500 metres of the groundwater, and the separation distances from the take bore
- the location of any existing bores within 500 metres of your take
- the location of any other water takes within 500 metres of your take
- the location and description of any land based effluent disposal system within 50 metres (*eg. septic tank disposal fields*)

B.2 What is the predominant geology from which the groundwater is to be taken? (*ie. sand, gravel, greywacke, volcanic*)

B.3 What is the land use in the vicinity of the take point? (*tick more than one box if appropriate*)

- Agriculture
- Horticulture
- Exotic forestry
- Native forest/bush
- Residential/industrial (urban)
- Other (*specify*): _____

C. Assessment of Effects on the Environment

An assessment of effects should be proportional to the scale and significance of the proposed activity. Where your take could have an adverse effect on the environment, a detailed environmental assessment is required. This may require a pump test and analysis of results to be completed, and a water balance estimation for the groundwater system.

C.1 Effect on the Groundwater Resource

What effect will your take, along with other takes, have on the groundwater levels in the area?

If there is a potential effect on long-term water levels, or there is insufficient information to be certain that effects will be minor, please suggest ways to reduce this effect (*mitigation measures*).

C.2 Contamination of Groundwater

The Regional Council has evidence of saltwater being drawn into groundwater aquifers in parts of the region. If your bore is close to the coast, you should check whether there is likely to be any connection between your bore and the sea. Also, the proposed take may draw water from contaminated sites or layers of poor water quality.

Is the pumping of the bore likely to cause contamination of the groundwater resource?

No, why not? _____

Yes, how will this effect be mitigated? *(eg. you could reduce your pump rate or cease pumping below specified groundwater levels)*

C.3 Effects on Nearby Waterways

Please ensure that all waterways including springs within 500 metres are indicated on the location map. Please measure the distance between your bore and any waterways accurately and show the distances on the map.

Will pumping from your bore/well reduce the flow in nearby waterways? *(eg. springs, streams, lakes and rivers)*

No, why not? _____

Yes, how will this effect be mitigated? *(eg. you could reduce your pump rate or cease pumping below specified groundwater levels)*

C.4 Affected Parties

Will the taking of water have an effect on the water available to any nearby property?

No, why not? _____

Yes, who? _____

Please ensure all bores within 500 metres are indicated on the location map. Please measure the distance between your bore and any nearby bores accurately and show the distances on the map.

If written approvals are obtained from all parties that may be affected by the water take and the effects of your proposed water take are minor, then the Regional Council is likely to process your application without public notification.

If written approval cannot be obtained, please suggest ways to reduce the effect on neighbouring bores (*mitigation measures*). _____

C.5 Consultation

Written approvals regarding your proposal are normally required from the adjoining land owners/occupiers and neighbouring water users.

Please see attached information requirement booklet for details of who needs to be consulted.

Any letters of concern/support or comment from persons consulted should be attached to this application form.

The Northland Regional Council can supply you with written approval forms to aid you with the consultation.

Have you consulted with any of the following potentially affected parties:

	Yes	No
Neighbours	<input type="checkbox"/>	<input type="checkbox"/>
Other nearby water users	<input type="checkbox"/>	<input type="checkbox"/>
Department of Conservation	<input type="checkbox"/>	<input type="checkbox"/>
Local iwi (<i>specify</i>): _____	<input type="checkbox"/>	<input type="checkbox"/>
Other (<i>specify</i>): _____	<input type="checkbox"/>	<input type="checkbox"/>

C.6 Other Adverse Effects

Will your take have any other adverse effects on the environment? For example will the noise of pumping disturb neighbours? Will water be able to pass from one aquifer to another? Could your pumping cause aquifer subsidence?

No, why not? _____

Yes, how will these effects be mitigated? _____

C.7 Positive Effects

What positive effects will the proposed take have? _____

C.8 Efficient Use

What measures are you proposing to minimise the wastage of water? *(tick as many as are considered appropriate)*

- Irrigating at night to minimise loss by evaporation
- Measuring soil moisture levels and using these as a trigger for irrigation
- Undertaking regular leak detection inspections and tests
- Using dripper irrigation
- Other *(specify)*: _____

C.9 Alternative Sources of Water

Have you considered the option of using any alternative sources of water?

Yes *(specify)*: _____

No
 Explain why you have decided to use the water resource applied for in this application rather than any of the alternatives: _____

C.10 Monitoring

What, if any, monitoring do you propose to carry out to ensure that your take does not have any adverse effect on the environment? _____

Please ensure all the relevant questions on this form have been answered fully.

If you have any queries relating to information requirements or wish to meet with a Council Consents Officer, please contact the Northland Regional Council.

Northland Regional Council Offices:			
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