INFORMATION REQUIREMENTS FOR RESOURCE CONSENT
TAKE OR USE GROUNDWATER

When submitting your application to the Northland Regional Council "the council" for a resource consent to take water from a bore, you need to ensure that sufficient information is supplied in support of your application.

The council has specific forms to help you supply the required information. When applying to take groundwater from a bore, please ensure all the relevant questions in AEE 2 are answered fully. Supplying this information will enable council staff to assess your application in terms of the Resource Management Act 1991, and any relevant resource management plans.

If all the necessary information is not supplied with the application then the council may return your application or request further information (pursuant to section 92 of the Resource Management Act 1991). This will lead to delays in the processing of your application.

If the effects of the proposed water take are minor, then the council is likely to process your application without public notification provided written approvals are gained from all parties that may be adversely affected by the water take. Details of the consultation required are presented later in this document.

If you are unable to supply the necessary written approvals from the affected parties, or if the effects of the take are more than minor, then the council must publicly notify the application. This can result in significant delays in the processing of your application and additional processing costs.

If you have any doubts as to who you need to provide written approvals from, or what information should be supplied with your application, then you should contact council staff to discuss the matter.

The following information relates to questions asked in AEE 2 – Take or Use Groundwater, and is provided to assist you with answering the questions.

A – Description of the Proposed Activity

In this section you should answer all the questions between **A.1-A.12**.

Question A.1

If you wish to take from a new bore yet to be drilled you may need to apply for a Land Use Consent to drill the bore. If you are unsure if a Land Use Consent is required please contact a council staff member who will be able to assist you.

Question A.2

The details of the bore(s) are important to assess the potential effects of the take. If the application is for a renewal, then the driller should have provided a bore log when the bore was drilled.

If you are unable to supply a copy of the bore log you may be aware of the bore depth, screen and pump depth as a result of an inspection of the bore or as part of bore maintenance. The council also has a database of many existing bores. If you are unsure of the bore details, please contact the council as your bore may already be registered.

The static water level is the natural groundwater level without any influence of pumping. (Generally the static water level is measured at least eight hours after any pumping from the bore has stopped.)

Question A.3, A.4 & A.5

All applications to take water must include information that justifies the amount of water being applied for. There are a number of ways that this can be done. Some examples are:

Water Use Type	Water Allowances Commonly Used
Pasture Irrigation*	30-40 cubic metres of water per day per hectare of irrigated pasture
Outdoor Horticultural Irrigation*	25 cubic metres of water per day per total hectare planted; or 30-40 cubic metres of water per day per canopy hectare
Indoor Horticultural Irrigation	5 litres per square metre of plants per day
Household Water Supply	180-220 litres per person per day
Stock: ▪ Dairy Cows (In Milking) ▪ Other Cattle ▪ Nursing Ewes ▪ Fattening Lambs ▪ Pigs	 70 litres per head per day 45 litres per head per day 9 litres per head per day 2.2 litres per head per day 22 litres per head per day

*Note: *If you are applying to take **more than 500 m³/day for irrigation purposes**, you must provide a water balance sheet. It should include estimates of the average daily water needs for each month over the period of irrigation, and of peak requirements. The water balance should take into account rainfall, soil types, evapotranspiration and soil moisture deficits and how these variables change over the irrigation season.*

Question A.6

Specify the typical number of hours that you would be taking water and the maximum number of hours during the "*worst case scenario*" (i.e. time of greatest need/use).

Question A.7

Most groundwater takes are via a pump (e.g. a surface or submersible pump depending on the depth to groundwater level.) The type and model of pump that you are using to take water is helpful information and can usually be determined by looking on the housing of the pump, or from irrigation and/or reticulation installation records.

Question A.8

There are a number of ways that the rate of taking can be measured or estimated. Many pump manufacturers can supply "pumping curves" that show the rate of pumping relative to the pressure head against which the pump is working. The rate of taking for irrigation can also be calculated by multiplying the emitter rate by the number of emitters used. In some cases the pump's capacity can be varied and if this is the case then the maximum pumping rate should be specified.

Question A.9

Many existing water takes have a meter installed that can be used to measure the amount of water taken per day. If you have a water meter installed, tick the yes box.

Question A.10

Tick the appropriate boxes. You will note that two lines are given. The months in which you usually take water should be ticked along the top row, and the months in which you occasionally take water ticked along the bottom row.

Question A.11

Indicate what time of the day you propose to take water.

Question A.12

For this question you need to tick the box which corresponds to the use for which the water is taken, and answer all the questions below that activity. This information is required as it justifies the volume sought and also provides evidence that the water is being used efficiently.

B – Water Resource Description

This section covers the characteristics of the water resource that you are proposing to take water from.

Question B.1

It is very important that you supply a map showing the items listed on the application form. The map may be hand drawn, however relevant distances are required between other bores or property boundaries etc. If your application is for a renewal a map is still required unless you refer to an accurate map already on the consent file.

Question B.2

The type of geology from which the groundwater is to be taken is important when assessing potential effects, particularly when there may be different layers of groundwater in the area. You can find out the type of geology from the bore log provided by the Driller, or from geological maps.

Question B.3

Tick the boxes that characterise the land use in the area of your proposed water take. You may wish to also include a description of the land uses on the map that needs to be supplied with your application.

C – Assessment of Effects on the Environment

In this section you need to consider what the effects of your proposed take will be on the environment. For the purposes of this section, you need to consider the effects of your proposed take under the "*worst case scenario*". For most water takes, the worst case scenario is when the quantity of water being taken is greatest and where this coincides with low groundwater flows and levels (generally at the end of summer, especially after a dry winter).

Depending on the size of your take and the groundwater resource, a pump test and analysis of the results, and water balance estimations may be required.

Please note the word "environment" includes other groundwater users, surrounding groundwater resource, surface water, land and local iwi. The information below will help you answer the questions of this section.

Question C1

Generally groundwater takes will lower groundwater levels in the surrounding area. The effects of a take on the surrounding groundwater levels depend on the characteristics of the groundwater resource, the amount of water you are proposing to take and the pumping rate.

You need to consider if the proposed take will adversely affect the groundwater levels in the area. This information can be gained through a pump test. However, in some cases the bore development test which was undertaken when the bore was drilled may be sufficient. This information is generally detailed on the bore log form. If the application is a renewal, please provide any trends in the groundwater level noted as a result of previous monitoring in your bore.

Question C.2

You need to consider if the proposed take will affect the groundwater quality in the area.

The council has evidence of saltwater being drawn into the groundwater resource in parts of the region. If your bore is close to the coast, you need to check whether there is likely to be any connection between your bore and the sea. Also a proposed take may draw water from contaminated sites or layers of poor water quality. The potential for groundwater contamination depends on the bore construction and the distance of the bore from the contaminant (i.e. saltwater, wastewater etc.)

Question C.3

Generally groundwater takes will lower the water levels of the groundwater resource and this can affect nearby water bodies i.e. streams, lakes and springs. You need to check whether there is likely to be any connection between your bore/well and any neighbouring water bodies.

Question C.4

You need to consider whether your proposed water take will have any effect on the availability of water for other users. This will depend on how much water you propose to take relative to the size of the groundwater resource.

The table below provides a guideline to identify potentially affected groundwater users depending on volume of your proposed daily take.

Proposed Rate of Abstraction from Bore	Radius of Affected Neighbouring Groundwater Users
Less than 5 cubic metres per day	100 metre radius
5 to 35 cubic metres per day	200 metre radius
35 to 100 cubic metres per day	400 metre radius
> 100 cubic metres per day	500 metre radius

Question C.5

Tick the boxes that correspond to the parties with whom you have consulted regarding your proposed water take. The council can advise you of those parties considered to be "affected" and can also supply you with a list of appropriate iwi contacts to consult.

Question C.6

Consider what other adverse effects may result from the proposed take and provide measures that can be taken to mitigate any other adverse effects

Question C.7

There are a number of possible "positive" effects that water takes can result in. These can include economic benefits to the community (e.g. jobs), secure water supplies to households, and many others.

Question C.8

The council promotes the use of technologies and water management techniques that minimise water wastage. Indicate what measures you propose to implement or use that will ensure efficient water use.

Question C.9

The Resource Management Act 1991 requires applicants to consider "alternatives" and discuss why they have made that choice. Alternative water sources include:

- Surface water such as springs, lakes, streams or rivers
- Water storage dams that collect water during winter time to be used during summer months
- Rainfall runoff collection systems

Question C.10

The amount of monitoring likely to be required will depend on a number of factors such as the quantity of water you are proposing to take, the size of the water resource, and the amount of water already being taken from the resource. A consent holder will commonly be required to regularly measure the quantity of water they take and submit "water use records". In other cases, monitoring of static water levels and pumping water levels for the production bore and surrounding bores may be required. The council may also require water quality monitoring.

If you have any queries relating to information requirements, please contact the Northland Regional Council.

Northland Regional Council offices:				
Whangārei Office 36 Water Street Whangārei 0110 Phone: 09 470 1200 or 0800 002 004 Fax: 09 470 1202 mailroom@nrc.govt.nz www.nrc.govt.nz	**Dargaville Office** 42 Hokianga Road Dargaville 0310 Phone: 09 439 3300	**Kaitāia Office** 192 Commerce Street Kaitāia 0410 Phone: 09 408 6600	**Waipapa Office** Shop 9 12 Klinac Lane Waipapa 0295 Phone: 09 470 1200 or 0800 002 004 Fax: 09 470 1202	**Ōpua Office** Unit 10 Industrial Marine Park Ōpua 0200 Phone: 09 402 7516