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| **Part B**  **Assessment of**  **Environmental Effects –**  **Take or Use Surface Water**  **(from a River, Stream, Lake, Spring or Dam)** | M:\Community Relations\All Staff - Communication resources\NRC logos for general use\NRC logo (full colour).png  Whangārei Office Phone: 09 470 1200  Fax: 09 470 1202  Kaitāia Office Phone: 09 408 6600  Waipapa Office Phone: 09 470 1200  Ōpua Office Phone: 09 402 7516  Dargaville Office Phone: 09 439 3300  Free Phone 0800 002 004  Email mailroom@nrc.govt.nz  Website www.nrc.govt.nz |
| **This application is made under section 88/section 127 of the Resource Management Act 1991** | To: Consents Department  Northland Regional Council  Private Bag 9021  Whangārei Mail Centre  Whangārei 0148 |

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| PART B – ASSESSMENT OF ENVIRONMENTAL EFFECTS |
| Your application must include an Assessment of Effects on the Environment. This form and the associated Information Requirement Booklet will 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 (e.g. river, stream, spring or lake). This will help you to propose ways to minimise those effects to the 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. |

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| A. | Describe the Proposed Activity |

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| **A.1 What is the name of the water body(s) from which you propose to take water?** |  |

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| **A.2** **What quantity of water do you propose to take?** |  | m³ per day |

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| **A.3** **How have you calculated the amount of water that you need?**  *(attach a separate sheet if required and see special note in the information requirements booklet relating to large irrigation takes in excess of 500 cubic metres per day)* | |
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| **A.4** **How many hours per day is water to be taken?** |  | (typical) |  | (max) |

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| **A.5 Is the water to be taken using a pump or via gravity feed?** | Pump | Gravity |

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| **A.6 What is the pump type and model?** |  |

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| **A.7 At what rate is water to be taken?** |  | litres per second |

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| **A.8 Will a water meter be fitted to measure the amount of water taken?** | Yes | No |

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| **A.9 Will a screen be fitted on the intake?** | Yes | No |

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| **A.10** **If there is already a screen on the intake, what are the dimensions of the screen, including the hole/slot size?**  *(a drawing showing the shape and measurements of the screen may be useful, this may be attached to the application)* | | | | | | |
|  | Screen length: |  | mm | Screen diameter: |  | mm |
|  | Hole/slot size: |  | mm | Density of holes/slots: |  | number/cm² |

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| **A.11 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 |  |  |  |  |  |  |  |  |  |  |  |  |

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| **A.12** **During what part of the day will you typically be taking water?** | | |
|  | During the daytime | During the night |
|  | 24 hours | “On demand” |

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| **A.13 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? (i.e. spray, trickle etc) | | | | | | | | | | |  | |  |
| 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 |
| Is there a fenced and/or planted riparian strip adjacent to watercourses in areas being irrigated? | | | | | | | | | | | | | |
| Yes | | | (width of riparian strip | | | |  | m) | | | | No | |
| **Horticultural Irrigation** | | | | | | | | | | | | | |
| What is the total area to be irrigated? | | | | | | | | | | |  | | ha |
| If glass/plastic are houses 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? | | | | | | | | | | |  | | |

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

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| B. | Water Resource Details |

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| **NOTE:** You must attach a map that shows the following:  The location of the water body  The location of the proposed take point(s)  The legal property boundaries in the vicinity of the take point and the names of the owners and/or occupiers  The location of any other water takes within 500 metres of your proposed take  The location of other streams, rivers and/or springs in the area  If the water body is a river or stream, you should indicate the direction of flow |

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| **B.1 What type of water body will water be taken from?**  *(tick appropriate box for either river or stream, spring, natural lake or manmade reservoir and answer those questions)* | | | | |
| **River or Stream** | | | | |
| What is the average channel width? | |  | metres | |
| What is the average depth of water? | |  | metres | |
| What is the estimated average water flow velocity? | |  | metres per second | |
| How would you describe the bed of the river or stream? *(tick more than one if appropriate)*  Gravel and boulders  Muddy  Sandy  Hard rock | | | | |
| What is the design minimum flow (DMF) at the point of taking? | | | | |
| *(see attached “information requirements” leaflet)* | |  | | litres per second |
| Are you proposing to reduce the water downstream of your point of taking to less than the DMF?  Yes  No  How was the DMF calculated or obtained? *(attach a separate sheet if required)* | | | | |
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| **Spring** | | | | | | | | | |
|  | What is the estimated minimum flow rate from the spring? | | | | |  | | litres per second | |
| How was the minimum flow rate estimated?  Volumetric measurement (e.g. using a bucket)  Flow measured accurately (e.g. gauged)  Visual estimate  Describe how the water from the spring will be collected and conveyed to the use site: | | | | | | | | | |
|  | |  | | | | | | | |
| **Natural Lake** | | | | | | | | | |
| What is the size of the lake? | | | |  | | | | hectares | |
| How deep is the lake? | | | |  | | | | metres | |
| Does the lake have a natural outlet *(i.e. does water flow from the lake)*? | | | | | | | Yes  No | | |
| What is the main source of water that fills the lake? *(tick as many boxes as appropriate)*  Direct rainfall  Runoff from surrounding land  Streams  Springs | | | | | | | | | |
| **Man-made Reservoir behind a Dam or Weir** | | | | | | | | | |
| What is the volume of the reservoir behind the dam? | | | | |  | | | cubic metres | |
| What is the design minimum flow (DMF) of the dammed stream? | | | | | | | | | |
| *(see attached “Information Requirements” leaflet)* | | | | |  | | | | litres per second |
| How was the DMF calculated or obtained? *(attach a separate sheet if required)* | | | | | | | | | |
|  | |  | | | | | | | |
| How does water flow downstream from the dam?  Through a pipe located through the dam  Over the dam via a spillway  Over the weir structure | | | | | | | | | |
| Other *(specify)*: | | |  | | | | | | |
| Does the dam/weir structure have a resource consent?  Yes  No  Does the dam/weir structure require a resource consent?  Yes  No  Is there a fish pass over the dam/weir structure?  Yes  No | | | | | | | | | |

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| **B.2 General Questions**  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)*: |  |

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| C. | Assessment of Effects on the Environment |

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| An assessment of effects should be proportional to the scale and significance of the proposed activity. Where your proposed take could have an adverse effect on the environment, for example if the take could reduce the flow of the stream or river to less than the Design Minimum Flow (DMF), you must supply a detailed environmental assessment. |

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| C.1 Affected Parties  Will the taking of water have an effect on the water available to any nearby property? | |
| No, why not? | |
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| Yes, who? | |
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| C.2 Effect of the Proposed Take on the Surface Water Resource  Are there any of the following in the vicinity of the proposed take point? | | | |
|  |  | **Present** | | |
|  |  | **Yes** | **No** | |
|  | Obvious signs or known aquatic biota (e.g. eels, other fish, insects, aquatic plants) |  |  | |
|  | Areas where food is gathered (e.g. watercress, eels, wildfowl) |  |  | |
|  | Natural wetlands |  |  | |
|  | Waste discharges (e.g. dairy sheds, industrial, treatment plants) |  |  | |
|  | Recreational activities (e.g. swimming, fishing, canoeing) |  |  | |
|  | Areas of special aesthetic value (e.g. waterfalls) |  |  | |
|  | Areas of significance to iwi |  |  | |

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| If you have answered **Yes** to any of the above, describe what effect your taking may have and the steps you propose to take to minimise (i.e. mitigate) these effects *(attach a separate sheet if necessary)*: | | |
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| Will your proposed take affect the average flow or depth of water?  Yes  No  If No, why? | | |
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| **C.3 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 take from the proposed water resource rather than any of the alternatives *(if any):* | | |
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| **C.4 Efficient Use of the Water Resource**  What measures are you proposing to minimise wastage of water? *(tick as many boxes as are considered appropriate)*  Irrigating at night to minimise water loss through evaporation  Measuring soil moisture levels and using these to manage irrigation needs  Undertaking regular leak detection inspections and tests  Using dripper irrigation | |
| Other *(specify)*: |  |

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| **C.5 Positive Effects**  What positive effects will the proposed take have? | |
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| **C.6 Monitoring**  What, if any, monitoring do you propose to carry out to measure any effects on the environment? | |
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| **C.7 Consultation** | | | | |
|  | Have you consulted with any of the following potentially affected parties: | |  |  |
|  |  | | **Yes** | **No** |
|  | Neighbours | |  |  |
|  | Other downstream water users | |  |  |
|  | Department of Conservation | |  |  |
|  | Fish and Game Council | |  |  |
|  | Local iwi *(specify)*: |  |  |  |
|  | Other *(specify)*: |  |  |  |

***Please ensure that all of 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.***

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| Northland Regional Council offices: | | | | |
| Whangārei Office | Dargaville Office | Kaitāia Office | Waipapa Office | Ōpua 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 | 42 Hokianga Road  Dargaville 0310  Phone: 09 439 3300 | 192 Commerce Street  Kaitāia 0410  Phone: 09 408 6600 | Shop 9  12 Klinac Lane  Waipapa 0295  Phone: 09 470 1200  or 0800 002 004  Fax: 09 470 1202 | Unit 10  Industrial Marine Park  Ōpua 0200  Phone: 09 402 7516 |