



INFORMATION REQUIREMENTS FOR RESOURCE CONSENT DISCHARGE ANIMAL EFFLUENT TO WATER AND/OR LAND

When submitting your application to the Northland Regional Council for a resource consent to discharge animal, including farm dairy, effluent to water and/or land, 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 discharge animal, including farm dairy, effluent to water and/or land, please ensure all the relevant questions in AEE 8 are answered fully. Supplying this information will enable Regional 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 Regional 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 discharge are minor, then the Regional 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 Regional Council must publicly notify the application. This can result in significant delays in processing and results in 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 Regional Council staff to discuss the matter.

The following information relates to the questions asked in AEE 8 and is provided to assist you with answering the questions.



A – General Details

In this section you should answer all the questions between **A.1-A.3**.

B – Description of the Proposed Activity

Questions B.1–B.3

Provide information on the source of the effluent. The source of effluent can influence the type and concentration of contaminants in the wastewater. Tick all the appropriate boxes in **B.1** and provide details on the maximum number of cows milked during the winter and summer months.

Separate applications are required if the treatment system does not treat all waste sources.

Question B.4 & B.5

The volume of “raw” effluent produced can be determined based on the number of cows milked and how long they are kept on the yard each day.

Washdown practices vary widely, with typically 20-90 litres of washdown water being used per cow per day. Check the amount of water you use each day. If this cannot be done, assume a figure of 50 litres per cow per day.

Question B.6

This relates to the proposed (or existing) treatment system. Tick the appropriate box and provide details of the treatment system by answering the associated questions.

The type of treatment system provides information on the likely quality of the effluent that is discharged into the environment. If your current treatment system is not ponds, wetland, ditch or drains, provide the details of the system including, the dimensions, holding capacity and any aerobic or anaerobic process carried out.

Natural wetlands are not considered to be suitable proposed treatment options.

Question B.7

This relates to the disposal system. Tick the appropriate box and provide details of the disposal system by answering the associated questions. If your proposed disposal system is not one of the options provided, tick “other” and describe the system in the space provided.

Disposal of effluent to land is encouraged because, if correctly managed, a land based system prevents effluent from getting into surface water and lowering groundwater water quality, and at the same time produces the benefits from applying nutrients back onto land. This can lead to effluent disposal being a permitted activity (ie. no resource consent required).

For disposal to water bodies, the effluent is required to be properly treated to prevent adverse effects on the water body. This is explained further in Section D.

C – Site Details

Question C.1

The information you supply in this map will enable the Council staff to understand the layout of your waste treatment and disposal system, and to adequately assess any potential adverse effects on neighbouring properties or waterways.

The location of the property, the site and adjacent waterways and property boundaries can be provided on a 1:50,000 topographical map, a legal survey plan or aerial photograph. It is important to ensure that sufficient detail is supplied on the map to identify where your property is located.

Your map may also be hand drawn. However, it should show the direction of north and be drawn to scale with the relative distance between the disposal and treatment system, the property boundaries and any water bodies shown.

Question C.2

Please note the general slope of the disposal area. The steepness of the land affects its ability to absorb liquid effluent. The steeper the surrounding land, the more likely surface runoff from the disposal area will occur and stability could be more easily compromised.

Question C.3

Uncontrolled stormwater entering treatment systems greatly reduces the effectiveness of the treatment process, and should therefore be excluded.

D – Assessment of Effects on the Environment

In this section you need to consider what the effects of your proposed discharge will have on the environment. For the purposes of this section, you need to consider the effects of your proposal under the “*worst case scenario*”.

The word “environment” includes the land, air, any adjacent water bodies, groundwater, downstream water users, adjacent landowners and local iwi. The information below will help you answer the questions of this section.

Question D.1

You need to consider whether your proposed discharge will have any effect on adjacent property and/or downstream water users. This may include the effects of contamination of water, or odour.

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

For discharge to land beyond 20 metres of watercourses, the Council will require that written approvals are obtained from any landowners/occupiers within 20 metres of the proposed treatment and disposal area, and also any groundwater users within 200 metres of the proposed treatment and disposal area.

For discharge to water, including natural wetlands, the Council will require that written approvals are obtained from landowners/occupiers within 20 metres of the proposed treatment and disposal area, and also any parties adjacent to the water body within 200 metres downstream of any discharge point.

Question D.2–D.4

If the proposed disposal system is to **discharge to land**, answer questions **D.2–D.4**.

Adverse effects which can result from dairy farm effluent disposal to land are contamination of groundwater, surface water bodies and breakdown of soil structure in the disposal area.

Effluent should be applied in a manner that prevents surface run-off or ponding. Surface run-off can contaminate surrounding water bodies while ponding may result in clogging of the soil and reduced infiltration rates.

The key issues to consider for discharge are the:

- area available for effluent disposal
- soil type
- water content of the soil
- proximity of the disposal site to water bodies ie. drains, streams, natural wetlands
- groundwater underlying the disposal site
- effluent loading rate, ie. volume and rate the effluent is applied
- nutrients and quality of the effluent to be applied

Note that some land discharges/irrigation are permitted activities and no resource consent is required for these.

Question D.5

If the proposal is a **discharge to water** then answer question **D5**. This question provides details on what values the receiving surface water may have and the potential effects of the discharge on those values.

Adverse effects can result from discharges into water bodies depending on the quality, quantity of the effluent discharged, and the sensitivity of the water body. The discharge may greatly reduce the water quality and result in algal growth and health risks to humans, animals and life existing in the water bodies.

The key components in farm dairy wastewater that can result in adverse effect on the quality of the water body are:

- total solids
- ammoniacal nitrogen
- biological oxygen demand
- bacteria (faecal coliforms)
- nutrients (nitrogen, phosphorus and potassium)
- discoloration

Sampling of the wastewater discharged can provide important information on the likely effects on the water body. If you have any records of typical quality of the farm dairy effluent discharged, provide a copy of the results with your application.

The Regional Water and Soil Plan for Northland sets out water quality guidelines to protect stream ecosystems.

The relevant receiving water quality guidelines are that after reasonable mixing, the discharge does not:

- (a) Cause the natural pH of the water to fall outside the range of 6.5-9.0,
- (b) Cause a change in the natural temperature of the water of greater than 3 degrees Celsius.
- (c) Cause the concentration of dissolved oxygen (daily minimum) to be reduced below 6g/m³.
- (d) Cause the four-day average concentration of ammonium to exceed the following:

pH	Ammonium, NH ₄ -N g/m ³				
	10°C	15°C	20°C	25°C	30°C
6.50	1.81	1.81	1.22	0.86	0.60
6.75	1.81	1.81	1.22	0.86	0.60
7.00	1.81	1.81	1.22	0.86	0.61
7.25	1.81	1.81	1.23	0.86	0.61
7.50	1.81	1.81	1.23	0.86	0.61
7.75	1.73	1.64	1.15	0.81	0.58
8.00	1.13	1.09	0.76	0.54	0.39
8.25	0.64	0.62	0.44	0.32	0.23
8.50	0.37	0.36	0.26	0.19	0.14

Note: pH and temperature, where practicable, should be measured in the midday-early afternoon period (noon to 2 p.m. NZ Standard Time). (43/34)

- (e) Cause the level of nutrients to fall outside the range of:

Dissolved Reactive Phosphorus	50 – 30	mg/m ³
Dissolved Inorganic Nitrogen (NO ₃ -N+NH ₄ -N)	40 – 100	mg/m ³
- (f) Cause the visual clarity of the water, as measured by black disc, to be reduced by more than 20% in waters where visual clarity is an important characteristic of the water body and 40% in other waters, depending on site conditions.



Question D.6

Tick the boxes that correspond to the parties with whom you have consulted regarding your proposed discharge. The Regional Council can advise you of those parties considered to be “affected” and can also supply you with a list of appropriate iwi contacts.

Question D.7

This question considers any alternative options available to the applicant to ensure that the Best Practicable Option of treatment and disposal systems is used to reduce the potential for adverse effects on the environment as a result of the discharge.

Such alternatives may be “add ons” to a two pond treatment system such as a mechanical aerator in the second pond to raise the oxygen level and generally improve effluent quality. An artificial wetland prior to discharge into a water body can significantly reduce sediment loads, nitrogen and bacteria in the wastewater. Irrigation of final effluent to land is also an option, and in many situations can result in no resource consent being required.

Please note that this guide is for discharges of animal effluent. You may have other discharges of contaminants from your farming operation which may also require a resource consent. Separate forms are available on request.

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

Northland Regional Council Offices:

Whangarei Office

36 Water Street
Whangarei
Phone: (09) 438 4639
or 0800 002 004
Fax: (09) 438 0012
mailroom@nrc.govt.nz
www.nrc.govt.nz

Dargaville Office

61B Victoria Street
Dargaville 0300

Phone: (09) 439 3300

Kaitaia Office

192 Commerce Street
Kaitaia 0500

Phone: (09) 408 6600

Opuia Office

Unit 10
Industrial Marine Park
Opuia 0290
Phone: (09) 402 7516