

DAIRY LAND USE

A farm operator's guide to writing a Freshwater Farm Plan

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Contents

Introduction	2
Why freshwater farm plans?	4
Options to develop to your Plan	5
How to create your freshwater farm plan	6
The farm story (recommended)	6
Administrative details	8
Key tasks to write your Plan	9
Risk Identification	10
Risk Management	17
Writing the Action Plan	20
Keeping evidence for auditors	25
Certification and audit details	26
Appendix 1. Glossary and definitions	26
Appendix 2. Inherent vulnerability examples	29
Appendix 3. Risk data groups	31
Appendix 4: Farming and Growing Activities	32

Disclaimer: The examples and tables supplied in this document are not complete freshwater farm plans or action plans. They are examples only and may not be appropriate for your farm or operation. You may have different actions and a different number of actions.

Introduction

This guide has been prepared to enable you (the farm operator) to be involved in the development of your own freshwater farm plan (Plan).


This guide can be used as support for writing your entire Plan, parts of it, or to inform you when engaging with a farm advisor or freshwater farm plan certifier who is writing one for you.

In this booklet you will find guidance and best practice tips for writing your Plan. It also includes examples of how information could be presented in your Plan. It does not provide a tick box template because meaningful freshwater farm planning is all about practical and effective on-farm actions that make sense for your individual farm and will have real impact on the health of freshwater in your local catchment.

Being involved in your own Plan development will mean you have greater control and confidence over what you commit to in your Action Plan.

When your Plan is complete, you can submit it to an approved certifier in your region. They will check you have met certification requirements including those specific to your catchment.

When writing your freshwater farm plan, it can be useful to keep in mind that Plans are living documents and you are not expected to do everything at once. Change will take time and measurable improvements may take a generation to see.



TIP: You can develop your entire freshwater farm plan yourself, or you can engage an advisor or freshwater farm plan certifier to help finish developing the Plan on your behalf to make sure it meets certification requirements.

More resources

You can find extra resources for writing your freshwater farm plan from a variety of sources including:

- Ministry for the Environment
- Ministry for Primary Industries
- Your regional/unitary council
- Your primary industry body
- Your milk supply company

You should read the System Overview Guidance published by the Ministry for the Environment for an overview of freshwater farm plans and information about certification and audit requirements.

Link: www.environment.govt.nz/publications/freshwater-farm-plan-system-overview

Visit your regional or unitary council website for more information and resources specific to your region. For example, the regional plan and the relevant catchment context, challenges and values information (CCCV).

Note: You can find a list of certifiers on your regional or unitary councils' website once you're ready for your freshwater farm plan to be certified.

Why freshwater farm plans?

Freshwater farm plans are a key part of the Government's Essential Freshwater reforms. The central principle of Essential Freshwater is Te Mana o te Wai – healthy freshwater supports healthy communities, a healthy environment, and a healthy economy.

Te Mana o te Wai prioritises the health and wellbeing of freshwater ecosystems, then the health of people, followed by commercial use.

A freshwater farm plan will help you to build on the work you are already doing to improve the health of freshwater and freshwater ecosystems in your catchment. In time, freshwater farm plans will be a powerful tool to demonstrate the commitment of New Zealand farmers to the environment.

Your freshwater farm plan will be:

- Tailored to your unique set of circumstances based on your local catchment, your farm landscape and climate, and your farming system.
- A record of the practical steps you're taking now and are planning to take in the future to improve freshwater quality in your local catchment.
- A farm planning process that puts the health of the whenua (land) and wai (water) at the centre of your decision making.
- The place to plan for all on-farm freshwater management practices. This includes actions to meet existing regulatory requirements and council rules.

Who needs a freshwater farm plan?

Farms over a certain size are required by legislation to develop a freshwater farm plan for certification.

You will need to have a freshwater farm plan if your farming or growing enterprise covers:

- 20 hectares or more in arable or pastoral use
- 5 hectares or more in horticultural use
- 20 hectares or more of combined use.

The land does not need to share a common boundary (be contiguous) to meet the threshold for requiring a Plan. Small blocks in the same catchment are also captured.

If you are unsure if you require a freshwater farm plan, contact your regional or unitary council for advice.

Example: Non-contiguous land that would trigger the requirement for a plan

The home farm is 150ha which triggers the need for a Plan. A 15ha block of land down the road is leased and is planted in a fodder crop for extra feed. As you are the primary decision maker on that block of land you are the farm operator. Although it doesn't share a common boundary with the home farm is considered to be a "non-contiguous" piece of the farm. This means the total land area for the farming operation is 165ha.

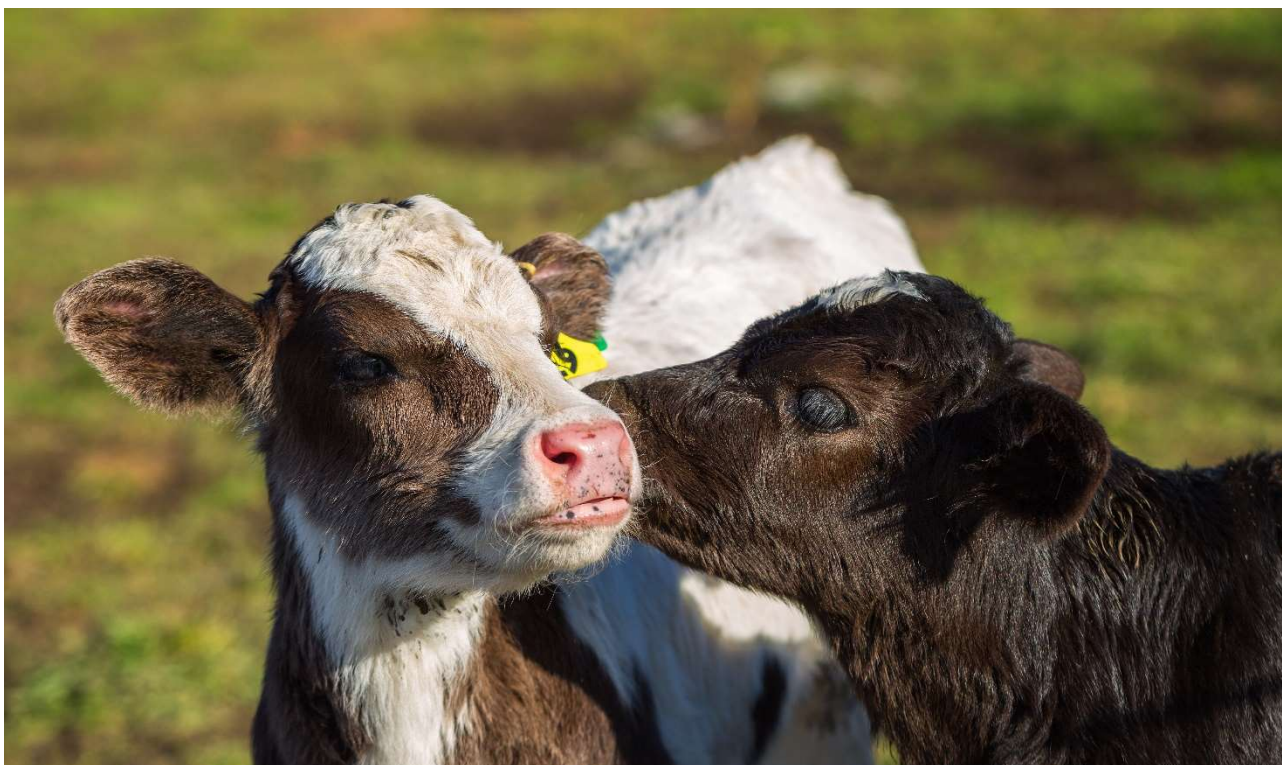
Options to develop your Plan

Your freshwater farm plan must include the information set out in the certification requirements for it to be certified. You can find information on the certification process in the [System Overview Guidance](#) on the Ministry for the Environment website (see link on page 3).

There are a range of options you can choose from to meet the certification requirements:

1. Update/build on your existing Farm Environment Plan (or similar). You can use the information in this guide to ensure your updated Plan will meet certification requirements.
2. Use an industry programme, catchment group template, or other resource that will meet certification requirements.
3. Write your own Plan in a way that is logical to you and your business as long as it meets certification requirements in your region.

This guide will help step you through the certification requirements to help you complete your freshwater farm plan ready for certification.



A note on reporting to council

The certifier is required by the regulations to share parts of your freshwater farm plan (the Administrative Details and the Action Plan) with your regional or unitary council. The certifier will supply this information through a secure farm data platform. Some councils may require more information and you can ask your council what data is being collected.

How to create your Freshwater Farm Plan

Every freshwater farm plan must include your administrative details, on-farm risk identification and assessment, risk management, and your Action Plan. This is your guide to writing those aspects of your Plan and some more recommended information that will support your Plan.

The farm story (optional but recommended)

Including your farm story in your freshwater farm plan is optional.

However, it is an opportunity for you to set the scene and think big into the future. It allows you to reflect on where you have been and where you are going. It's a place for you to record your long-term vision and goals. This section is **not assessed** for certification and is not auditable.

Example Farm Story

The farm has been a dairy unit since 1965. It has been in the *Farmer* family from the start. The total farm area is 175ha, of which 170ha is effective and the balance is made up of wetlands, waterways, shelter, tracks, yards, and buildings.

The farm peak milks 475 cows. They all leave the farm for the 6-week winter period. All replacements are grazed off the farm until 1 June, to be ready to calve from 27 July. It is best described as a 'DairyNZ system 3' with supplement used in the shoulders of the season.

Our Freshwater Farm Plan sets out how we manage our farming activities. For us, it is to ensure the impacts on the environment are minimal and that we leave the place in a better condition for future generations. We understand that all this is journey. We have started this journey by looking at what we do daily and how we can do things better. We are proud of our place and are committed to doing the best for the land and the environment. We want to enhance the streams that run through the property and biodiversity in the patches of native bush while ensuring our stock remain in good health, productive, and the farm remains profitable.

Our biggest challenge and our biggest asset are the soils upon which we farm. Farmed well, the soils are very productive. However, avoiding soil pugging and compaction can be a real challenge at times.

We have already started a programme to plant all the waterways on our property over the next few years and in 2018 we undertook a major upgrade of the effluent system.

Suggested contents of a farm story

Farm history	A farm story is an opportunity for you to outline the farms history- is it newly purchased by you or has it had generations of your family's ownership. Here you can reflect on the farm's past and think about its future. Ka mua ka muri means walking backwards into the future, it is the idea we should look to the past to inform the future.
Farm objectives	What are the motivations for change on farm? For example, is there a desire to improve work life balance by simplifying farm systems or perhaps to enhance the land and ensure its future security for family succession? These objectives set out the broader vision of a job well done.
Key principles to operate by	These could be principles ranging from financial, staff, stock, cultural, and/or land management. Principles are meaningful to your operations and outline the way you do things.
Key challenges	This is a place where you can begin to consider your farms operational challenges, is it steep slopes, free draining soils, boundary issues, through to challenges such as mixed ownership with different ethos or priorities.
Work already completed	While you will detail this work elsewhere, this is a place to jot down the things you have done already to help set the background of the current state of the farm and your work towards improved freshwater outcomes.



TIP: Your farm story gives certifiers and auditors insight into your connection to the land. It will help them understand how and why you have made some decisions in your Actions Plan and implementation timelines.

Administrative details

The information outlined in the following table must be included in your freshwater farm plan.

ADMINISTRATIVE DETAILS	TIPS
The name, contact details, and New Zealand Business Number (if any) of the farm operator	The farm operator is the person/company/trust who is ultimately responsible for the farm. Your business number can be found by searching the companies register if you do not have it recorded elsewhere. Link: www.companies-register.companiesoffice.govt.nz
The names and contact details of any other persons who are the owners, leaseholders, or licence-holders of land on the farm	This includes other trustees if the farm operator is a trust, all partners in a partnership, directors if the operator is a company, etc. For Te Ture Whenua, you do not need to list all people with interest in the land. You may choose to list all trustees or the chairperson or chief executive.
The name of the individual who has prepared the Plan	This may be yourself, a farm manager, a farm advisor, or certifier.
The physical address of the farm	Provide all addresses for the land covered by the same Plan.
Legal land titles and parcels of the farm	This can be easily found on your rates bill or any resource consents held on the property. You can also find this information on council websites.
The total farm area in hectares	This includes all land covered by this freshwater farm plan, even if it does not share a common boundary.
The leased or licensed area (if any) in hectares	If you are leasing land and are classified as the farm operator, then you would include it on your Plan rather than expect the owner to have their own Plan.
Any current resource consents held in respect of the farm that are relevant to the preparation of the freshwater farm plan	You should provide the consent unique number, the type of consent (water take, land use, discharge etc) and its purpose i.e. "To take water for the purpose of...".
The land use	This should include all land uses not just the primary land use. Dairy, dairy support, sheep/beef, arable, or horticulture. Horticulture should be made more specific by specifying the activity. E.g. market gardening, process crops, apples, kiwifruit, vineyard.

[^] This information will be provided to your regional/unitary council by your freshwater farm plan certifier.

The Plan

As no catchment or farm is the same, there is no one size fits all approach to writing your Plan.

Writing your Plan can be split into three key steps:

Risk identification and assessment: Understanding the catchment context and mapping your farm to allow for identification and assessment of risks.

Risk management: Determine how best to manage those risks. If you are already managing them, then outline this in your Plan to gain recognition for existing work. If the risks are not already being managed, then you need to add these “new actions” to your Action Plan.

Action planning: After determining what actions need to be taken, you will categorise and select timeframes specified for implementation.

This process is outlined below:

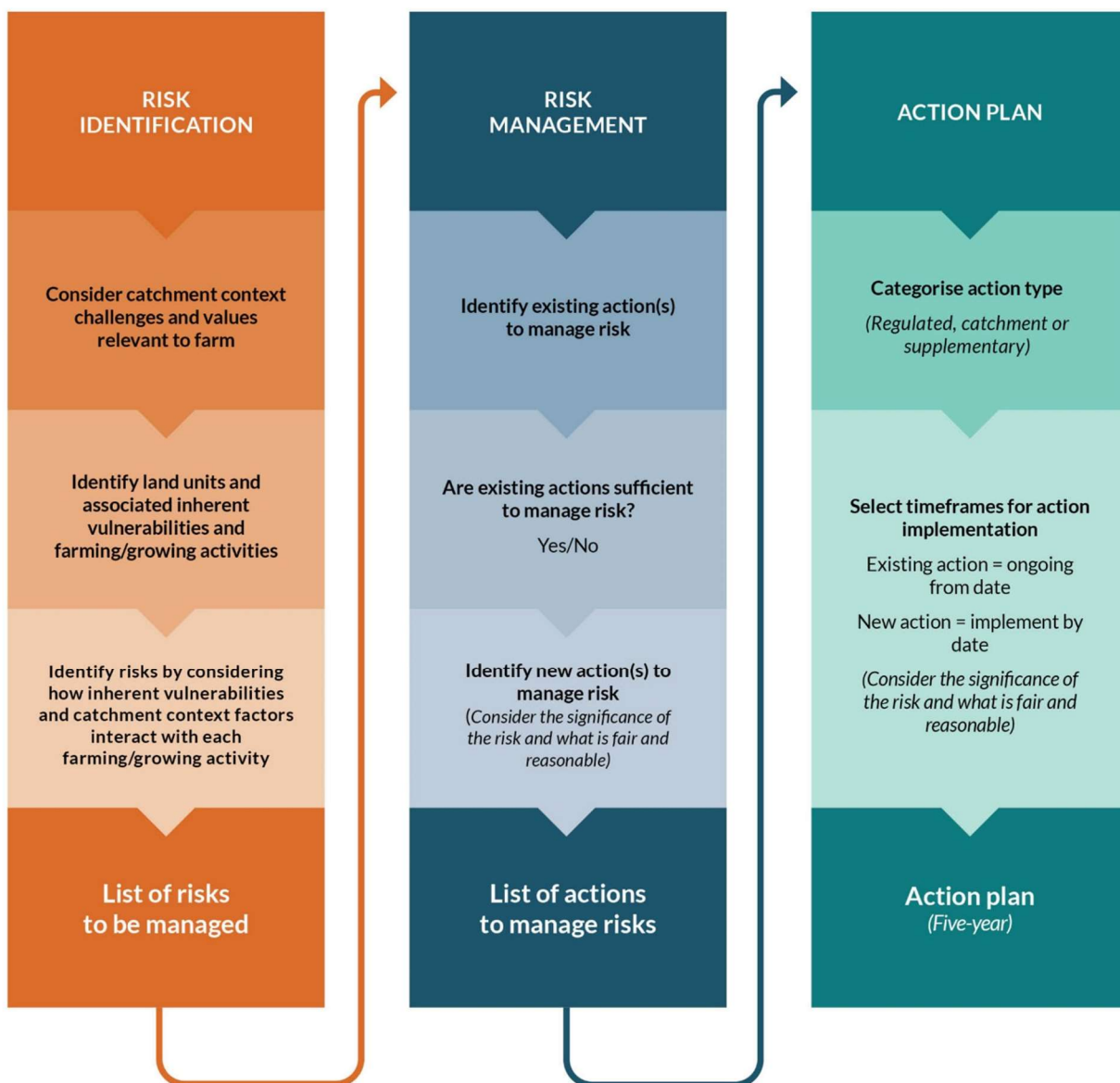


Figure 1: Process of identifying and managing risk via existing and new actions.

Risk Identification

There are three key steps to identify your on-farm risks to freshwater. You need to:

1. Understand and have regard for your Catchment Context, Challenges and Values (CCCV).
2. Produce maps which help identify your land units, their inherent vulnerabilities (these are risks to freshwater and freshwater ecosystems based on biophysical factors such as slope, soil type, climate, and includes irrigation and drainage) and your farming/growing activities on those units.
3. Decide how those risks on farm, interact with the CCCV.

1. Catchment context, challenges and values (CCCV)

Freshwater farm plans are a tool to improve freshwater health. To achieve this we need to understand the existing state of the catchment. This is pulled together in the catchment context, challenges and values (CCCV) information produced by your regional or unitary council and will be available on their website when they are completed.

The CCCV information will help you to understand the unique environmental features, current environmental health status, cultural values and practices, and important recreational sites for your catchment.

You then need to consider how your operation and activities contribute to your local catchment or sub-catchment. To do this, you need to consider your farm's natural features, inherent vulnerabilities, and how your own activities impact the health of freshwater and freshwater ecosystems in your catchment.

You will then apply your catchment context information to help to identify how best to manage or reduce those impacts.

DEFINITION	INCLUSIONS
<p>Context is the key information about your catchment.</p>	<ul style="list-style-type: none"> • Freshwater bodies • Freshwater data • Landforms • Soil data • Climate data
<p>Challenges are the threats and issues facing freshwater and the threats to identified values in your catchment.</p>	<ul style="list-style-type: none"> • Contaminants (for example nitrogen, phosphorus, sediment, bacteria) • Freshwater habitat loss • Degradation of sites and/ or species of cultural or community significance
<p>Values are the things about your catchment that are important to the community</p>	<ul style="list-style-type: none"> • Catchment freshwater objectives, priorities, or outcomes identified in policies, regional and / or iwi plans • Cultural significance and matters of importance to tangata whenua • Sites and/ or species of cultural or community significance

***** Example of CCCV information to be considered during the development of your freshwater farm plan *****

Identifying the catchment context information relevant to the farm

The farm is located within the northern streams area of the South Canterbury Coastal streams sub-regional chapter of the Canterbury Land and Water Regional Plan. The plan rules, alongside recent national regulations under the NES Freshwater (specifically Intensive Winter Grazing and the Nitrogen Cap) alongside the Stock Exclusion regulations apply to the farm.

The community objectives relevant to the farm (as outlined in the catchment context) include:

- Resolving the current water take over-allocation through encouraging alternative water supplies such as on-farm storage alongside efficient water use.
- Restricting nitrogen losses to the environment.

The cultural aspects relevant to the farm (as outlined in the catchment context) include:

- The Ōtaia (Otaio river) is a kāinga mahinga kai (food-gathering place) where aruhe (bracken fernroot), kāuru (tī kouka/cabbage tree root), and tuna (eels) were gathered.
- The river provides important habitat for culturally significant indigenous species that are threatened and at risk, including tuna (eel) and inaka (whitebait).

There are no identified specific cultural or community sites on or downstream of the property.

Example of how to include catchment context information in risk identification process

The farm has several ephemeral streams and Critical Source Areas that run into the Otaio river during periods of heavy rainfall. This results in direct pathways for contaminants to enter the waterway which could impact the abundance and safety of mahinga kai, alongside the abundance of threatened and at-risk species downstream of the property.



2. Maps to be provided in a freshwater farm plan

To meet certification requirements, you are required to provide maps containing information that relates to your risk identification and action selection process.

The purpose of the mapping exercises is to help you, the certifier, and the auditor understand your farm, identify your risks, and show how your actions are managing these.

You may present the maps in a way that makes most sense to you, providing the requirements are met. This means you can decide on the mapping tools you use, the form, size, the number of maps, and the combination of features you display on each map.

For more information on the mapping requirements for your freshwater farm plan. Please read our short supplementary guide titled, '*A Farm Operator's Guide to Freshwater Farm Plan Mapping*'.

Identifying Land Units

To meet certification requirements you must identify, map, and describe your Land Units as part of your freshwater farm plan.

Land Units are defined as: 'An area of contiguous or non-contiguous land with similar natural and/ or biophysical features'. Contiguous means sharing a common boundary

These units are based on the natural biophysical features of the land (slope, soil, climate) but also includes land modifications i.e., modified through surface or sub-surface drainage and/or the addition of irrigation water- including effluent. To prevent duplication later on, you should keep the number of Land Units to a minimum.

When defining and mapping land units you should consider the following features:

- soil types (e.g., heavy versus free draining)
- climate
- landform (e.g., slope, aspect, underlying geology etc.)
- presence of irrigation (including effluent irrigation)
- presence of land drainage (surface and sub-surface).

When describing your land units, it is recommended you give each land unit a name and/or number. It is helpful for certifiers and auditors if you supply the map number that maps the land unit.

Your description should include:

- soil types and characteristics (e.g., poorly drained, free draining, erosion prone, their versatility),
- slope (including degrees),
- landform (particularly useful for erodible hill country),
- climate (especially rainfall),
- connectivity to water (presence and location of fresh waterbodies, groundwater proximity etc),
- [critical source areas](#) (see the glossary for the legal definition)
- sites, species, or ecosystems of cultural and/ or community significance, (found in the CCCV)
- irrigation (including system type),
- land drainage – surface and sub-surface (pumped or gravity),
- the land use.

Areas where the above features are similar should form a single land unit. Reminder- these pieces of land do not need to be joined together, see Map 1 on Page 13.

Map 1: Dairy System



Identifying Inherent Vulnerabilities

To meet certification requirements, you must identify and describe the inherent vulnerabilities in each Land Unit. Inherent vulnerabilities are defined as “risks to freshwater and freshwater ecosystems from the biophysical features of the land”. They are based on the biophysical features such as slope, climate, and soil type which sets the base risk status of the Land Unit.

This also includes the identification of any significant sites (including sites identified in the catchment context as having significance) and critical source areas. Inherent vulnerabilities can arise from human made “land modifications” such as irrigation and drainage, as these can alter the land’s features.

To identify inherent vulnerabilities (see page 29 for examples of inherent vulnerabilities) you should consider the biophysical features (soil, slope, climate) of the land. This includes from irrigation and/or drainage.

You then consider how the nature of those features could give rise to vulnerabilities to freshwater or freshwater ecosystems. A table of “risk groups” on page 31 can help you do this.

It is recommended that your descriptions of inherent vulnerabilities for each land unit includes:

- the biophysical feature or features relating to the inherent vulnerability (this may be included in the land unit description), e.g., landform, climate.
- the specific nature of the feature or features that may give rise to vulnerabilities to freshwater (this may also be included in the land unit description) e.g., siltstone hill-country in a high-rainfall area that is prone to shallow slipping.
- the specific adverse effect the vulnerability may lead to e.g., sediment-loss to surface water resulting in sedimentation of streambed.

Table 1: Example of how you could layout your land unit information in your freshwater farm plan

Land Unit No.	Land unit name	Map no.	Land Unit description	Inherent vulnerabilities (appendix 2)
1	Pasture flat no tile drains	2	<p>Two main soil types.</p> <ul style="list-style-type: none"> • Drummond soils. These soils are generally deep and well drained. The soil has very low vulnerability of water logging and has moderate soil water holding capacity. The Potential Available Water of this soil is 87mm) • Woodlaw soils. These soils are moderately well drained but are vulnerable to water logging due to the presence of a hard stone pan at 60-85cm. The Potential Available Water of these soils is 92mm. <p>The land is flat to undulating making it very accessible and versatile.</p> <p>The climate is typically low rainfall in summer and higher in winter.</p> <p>There are no waterways in or near the unit although there may be some runoff from the Woodlaw soils at times of high rainfall.</p> <p>There are no critical source areas in this LU.</p> <p>The entire LU is available for effluent irrigation-applied via travelling gun. The land is used for pastoral grazing for the milking platform and effluent dispersal via irrigation</p>	<p>Due to the soils being well and moderately well drained, as well as receiving irrigation and effluent, the following vulnerabilities have been identified:</p> <ul style="list-style-type: none"> • Vulnerable to contamination of surface water through pathogen runoff. • Vulnerable to contamination of surface water through phosphorous runoff. • Vulnerable to contamination of surface water through nitrogen runoff. • Vulnerable to contamination of groundwater through pathogen leaching. • Vulnerable to contamination of groundwater through phosphorous leaching. • Vulnerable to contamination of groundwater through nitrate leaching.

Identifying Farming and Growing Activities

To meet certification requirements, you must identify the farming/ growing activities being carried out on each land unit as a part of your freshwater farm plan.

After identifying Land Units and inherent vulnerabilities you now need to identify your farming/ growing activities. These are the activities undertaken in the management or operation of the farm.



TIP: Where activities are across multiple Land Units, you need to ensure your management of the risks are appropriate to manage the level of risk for each Land Unit.

See page 31 for a list of common farming and growing activities by group and sub-group. It is recommended that you use this list to help you identify your farming/ growing activities. Then go on to add any of your own activities not listed.

3. Combining on farm risk with a catchment's context, challenges and values (CCCV)

You must show in your freshwater farm plan that you have considered how both the inherent vulnerabilities and the farming/growing activity occurring in a Land Unit come together to create individual risks to freshwater.

You must then also show in your Plan that you have had regard to any relevant catchment context factors when identifying and assessing each risk. This could be done by:


- including written identification of any CCCV info you considered when identifying each risk,
- including a written summary of any identified risks that relate specifically to CCCV information as a part of your written summary of catchment context information relevant to your farm.

Once you have identified each risk you must assess the significance of that risk to freshwater and freshwater ecosystems. You may choose the method you use to assess the significance of the risk.

Consider the risk

You should consider the nature and significance of each risk that you identify and assess, and what actions might be appropriate to manage it effectively.

Each risk is unique to your CCCV, inherent vulnerabilities, and farming/growing activities.



TIP: It's important for the risk identification and assessment process that you don't factor in current actions you're taking to manage risk from farming and growing activities. Focus on the risks that would occur as a result of the activity if you did not take steps to manage these risks.

Table 2: Example of how you could layout your risk assessment information in your freshwater farm plan

Land Unit No	Farming/ growing activity group (appx. 4)	Farming/ growing activity sub-group(s) (appx. 4)	Farming/ growing activity description	Inherent vulnerabilities (appx. 2)	Catchment context	Risk group(s) (appx. 3)	Risk
1	Nutrients	Nutrient application	Nutrients are applied to pasture as determined through soil tests and crop growth stage.	<p>Due to the soils being well and moderately well drained, as well as receiving effluent, the following vulnerabilities have been identified:</p> <ul style="list-style-type: none"> Vulnerable to contamination of surface water through pathogen, nitrate and phosphorous runoff. Vulnerable to contamination of groundwater through pathogen, nitrate and phosphorous runoff. 	<p>Water quality in the catchment is average to poor. Monitoring indicates issues in the catchment associated with sedimentation, phosphorous, nitrogen and <i>E. coli</i>.</p> <p>Current state and trend data for the stream indicates the priority contaminants for management in the sub-catchment are phosphorous and <i>E. coli</i>.</p> <p>Culturally, the river is a place of mahinga kai (food gathering).</p> <p>The river provides habitat for indigenous species that are threatened and at risk, including tuna and inaka.</p>	<p>Nitrogen – groundwater and surface water</p> <p>Phosphorous – groundwater and surface water</p> <p>Sediment</p> <p>Impact on cultural sites and threatened indigenous species.</p>	High risk of leaching due to nutrient use, soil type and effluent irrigation being applied.
	Land and soil	Pasture and grazing management Erosion	Cattle graze the pasture in rotations. Cattle are moved when pasture cover is approaching target residuals.				Low-Medium risk of grazing animals creating sediment loss through pugging and run off.
	Point source	Gateways Troughs and stock camps	Cattle move through gateways daily as they come and go from the milking shed. Troughs are in every paddock to ensure continuous drinking water access.				Medium to high risk due to the soil type, these areas can have higher loading and therefore risk of nutrient and pathogen leaching.
	Effluent irrigation	Take and application infrastructure Application management	Effluent irrigation occurs on this L7U.				High risk due to the soil types, these areas can have higher risk of nutrient and pathogen leaching. High risk of run off of nutrient and pathogens.

Risk Management

Risk is managed by actions you take to avoid, remedy, or mitigate one or more adverse effects on freshwater and freshwater ecosystems. Actions are:

- Physical work (for example, fencing or planting)
- Practices (for example, how an activity is undertaken)
- Processes or procedures (for example, training staff in how to undertake an activity)

Actions are separated into two types at this stage - existing actions and new actions.

Identifying actions

After you have identified and assessed your on-farm risks, you must consider what actions might be appropriate to manage it effectively.

Once you have identified a possible action or actions to manage a risk, work through the 'Identifying Actions to Manage Risks' flowchart (Figure 2) and consider the factors set out below to ensure the action is fit for purpose.

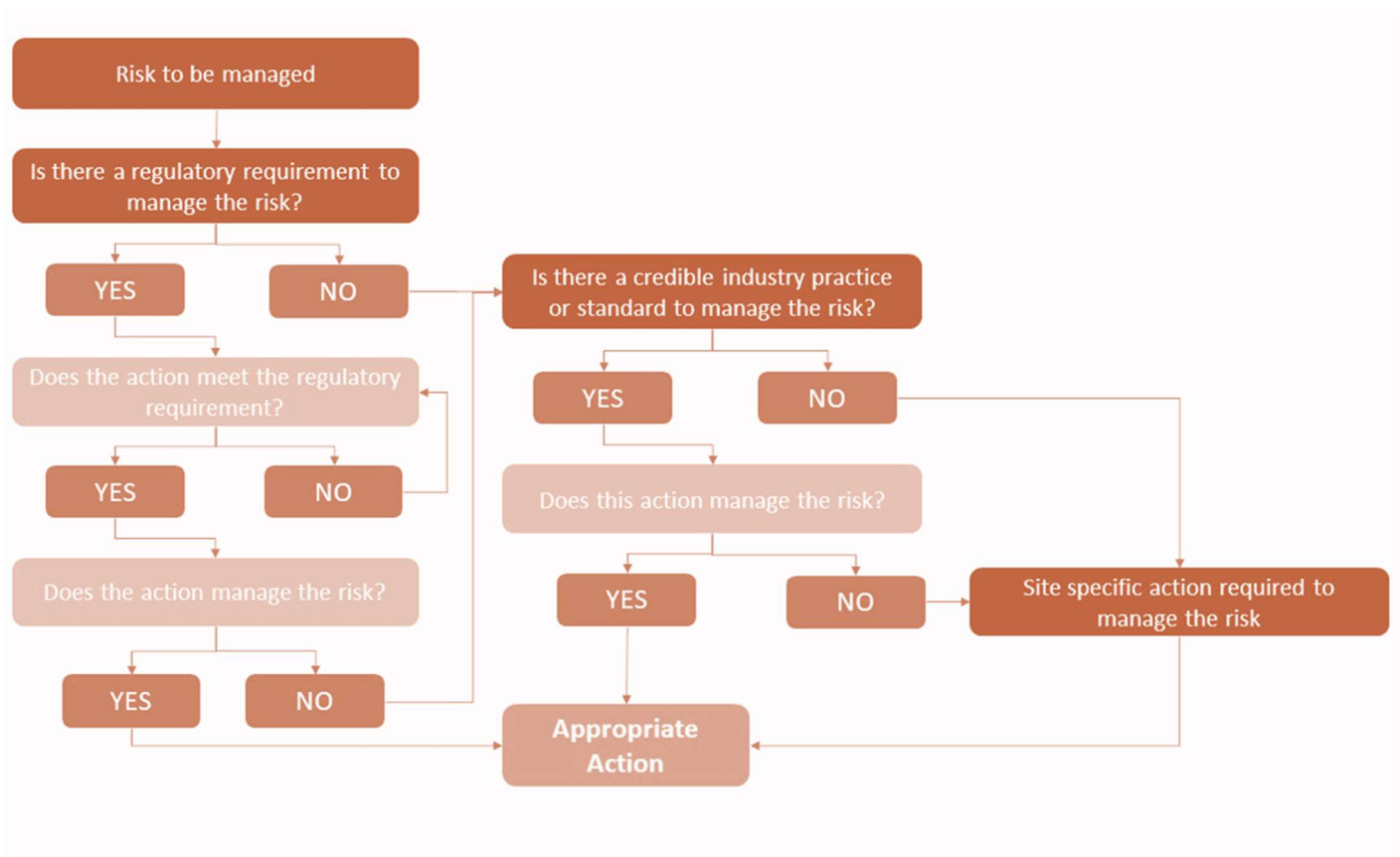


Figure 2: Identifying Actions to Manage Risks Flowchart

Consider: Is the risk related to other regulatory requirements?

You must comply with all regulatory requirements relating to freshwater.

If there is another regulatory requirement (other than freshwater farm plan requirements) related to the risk, the selected action or collection of actions must meet or exceed this. If the action or collection of actions do not meet a regulated requirement, they will not be fit for purpose.

If you intend to use your Plan to comply with another regulatory requirement, you must indicate this in your Plan. Please read the section on page 24 “Relationship between freshwater farm plans and other regulations” for more information.

Consider: Is the action based on best available information?

Actions should be considered and selected using the best available information. Best available information means information that is:

- from a credible source (i.e., scientifically proven information that is free from errors and bias)
- current (i.e., information that is up to date and is being applied)
- applicable to the situation (i.e., information that is relevant to the farming system or environment).

Consider: Does the action manage the risk to freshwater?

If the action is a regulated requirement, you should consider whether it will adequately manage the identified risk and the assessed significance of the risk.

If the action is based on best available information such as an agreed industry or practice standard, you should consider whether it will adequately manage the identified risk and the assessed significance of the risk for your farm.

A regulated requirement or agreed industry or practice standard may not be enough to manage the full scope and significance of a risk when you consider inherent vulnerabilities and catchment context factors in combination with your farming/growing activity. In this situation, you will need to select an action or actions that go beyond those requirements or industry or practice standards to properly manage the identified risk.



TIP: Keep in mind that each risk is unique to your catchment context, challenges, and values, alongside your farm's inherent vulnerabilities and farming/growing activities.

New Actions

When selecting new actions you must consider:

- the significance of the risk to freshwater and freshwater ecosystems
- and whether a timeframe for a specific action is a regulatory requirement (eg, a deadline required under other rules or regulations).

When identifying Actions, you must also show that you have had regard for your area's catchment context, challenges, and values information.

Actions selected must be clearly written and be measurable.

Your Plan will set out how the selected action will manage the risk as it is identified.

***** Example of the process to select Actions to manage an identified risk *****

Risk: The risk identified is nitrogen and *E. coli* entering groundwater and surface water due to over application of effluent irrigation.

Identifying existing actions

The effluent irrigation system was bucket tested during commissioning 5 years ago and now is visually assessed for evidence of ponding and run off. Effluent application is determined from visual assessment of soil moisture by the irrigation manager.

Are existing actions sufficient?

Visual assessment during system operation shows there is no run-off or ponding occurring, so the risk of surface run off to water is being managed. However, this visual assessment does not consider the risk to groundwater. Effluent system testing should include distribution uniformity, application intensity (mm/hour), as well as application depth.

Visual assessment of soil to determine soil moisture deficit is unreliable and subjective. A new action needs to be identified.

Identify new actions

New Action: The effluent system should be performance tested annually by the farmer by following the DairyNZ Effluent Spreading Depth Test. This will calculate the distribution uniformity, application intensity (mm/hour), as well as application depth.

New Action: A soil moisture sensor is to be installed to give more accurate data and ensure the effluent system manager is only applying effluent when there is an appropriate soil moisture deficit that can absorb the effluent applied.

Writing the Action Plan

You will need to put all your identified risks and selected actions into an Action Plan.

The Action Plan is a key piece of your freshwater farm plan that your certifier will report to your council, and that your auditor will use to assess your audit grade. Your audit grade then determines your future audit frequency.

Your Action Plan must include:

- Each identified risk and the related actions
- The Land Units you will do the action on
- Whether the action is existing or new
- The timeframe for completion or implementation of each action
- The category of each action

Writing Actions

All Actions must be written in a clear and measurable way in your Action Plan. You should choose actions that are SMART: Specific, Measurable, Attainable, Relevant, and Time-based.

When your Plan is audited, your auditor will assign your grade based on their assessment of whether you have implemented the actions as set out in your Action Plan.

SMART ACTIONS TIPS	
<p>Specific: Define the action as specifically as possible. Describe exactly what will be done, implemented, and/or achieved.</p>	<p>Vague or broad actions are harder to interpret. Specific actions remove auditor or certifier interpretation and allow you clarity of what needs to be achieved to get an A grade.</p>
<p>Measurable: Ensure you can practically demonstrate (show evidence) that the action has been or is being implemented.</p>	<p>Auditors rely on evidence to grade the Action. No evidence or an inability to measure will result in a B, C, or D grade depending on the category of the action. NOTE: a measurement might be a visual confirmation of an Action.</p>
<p>Attainable: Ensure that the action is achievable for your farm system in the timeframe you have assigned.</p>	<p>If you do not achieve the action your audit grade will reflect this as either a B, C, or D grade. Be careful with what you commit to and when you will do it.</p>
<p>Relevant: Ensure the action will manage the identified risk. Describe how the action relates to the risk (and farming/ growing activity) that it's intended to manage.</p>	<p>When selecting actions you should have followed the flow chart in figure 2 to ensure it is managing the risk.</p>
<p>Time based: Identify a specific and realistic date for implementation or achievement.</p>	<p>Not all Actions can be implemented immediately, having timeframes allows you to spread the load across the 5 year timeframe of the Plan.</p> <p>Regulated actions that have timeframes associated with them must be met, you cannot delay or opt out via your freshwater farm plan.</p>

Setting implementation timeframes

You must set a timeframe for each of your identified actions to be achieved or implemented by.

The identified timeframe must be included in your Action Plan. When identifying timeframes, you should consider the significance of the risk to freshwater or freshwater ecosystems, and whether there is a regulated timeframe you must meet (under other regulatory requirements).

You should also have regard to the catchment context, challenges, and values when setting timeframes.

If an action is related to another regulatory requirement, and the requirement states a date or timeframe for completion or implementation, you cannot delay that timeframe using your Plan even if the perceived risk is less significant.

If an action is related to another regulatory requirement, but the risk is significant, it might be a prompt for you to take an action prior to the date or timeframe in the regulations.

Timeframes must be fair and reasonable. To assess whether a time frame is fair and reasonable, refer to the info on fair and reasonable actions on page 22. The fair and reasonable assessment does not apply to regulated actions that have a regulated implementation timeframe.

The timeframes given for existing actions could be:

- The date you started the action, or
- the date the freshwater farm plan is certified.

The timeframes given for new actions could be a:

- completion date (the date by which the action will be fully complete), or
- an implementation date (the date by which an action will be put into practice or become required process or procedure).

Long-term actions

Some actions may need to be implemented over a longer timeframe than the five-year action plan cycle (e.g., farm-scale soil erosion control programmes, infrastructure upgrade projects). These actions are referred to as long-term actions.

When planning long term actions, you should consider:

- The cost and extent of the overall actions required in relation to the farm system.
- The complexity to implement the action.

These factors will help you plan an overall timeframe for the required work to be completed and identify smaller components of the wider action that will be part of the overall implementation.

- Smaller components or individual actions that will be implemented within the five-year action plan timeframe must be included in your Action Plan.
- Actions beyond the five-year timeframe will not be included in your Action Plan.

Requirement to categorise actions

It is a certification requirement to categorise your existing and new actions.

There are three categories you must assign to your Actions:

Regulated actions: are actions that address risks to freshwater and freshwater ecosystems and relate to a relevant regulatory requirement (could be from central government or council) under a specified instrument. A **specified instrument** means any designation, national environmental standard, national planning standard, regulations made under Part 14, resource consent, rule in a plan, or water conservation order.

Catchment actions: are actions that address risks to freshwater or freshwater ecosystems that directly relate to catchment context and are not regulated actions.

Supplementary actions: are actions that address a risk to freshwater or freshwater ecosystems but are not catchment actions or regulated actions.

The fair and reasonable test

When you select Actions to manage your risk and set timeframes for implementation, the certifier will consider these and assess if the action and the timeframe for implementation are appropriate to manage the risk.

If a certifier assesses that an Action does not go far enough to manage the risk, or if it is not being addressed fast enough, they will tell you this. If you choose not to change an Action or timeframe, you will need to provide evidence why your current position is the only option available right now.

Your certifier will then consider this evidence and assesses if the Action and timeframe are fair and reasonable based on the following criteria:

- Feasible (achievable for the farming system/business)
- Possible within the assigned timeframe
- At least meets accepted minimum industry practices or standards
- Based on best available information (all sources of credible information should be considered)

The evidence you provide may come in a variety of forms, but you should consider the four criteria listed above that the certifier will take into consideration. All the evidence you gather should be to answer at least one of those criteria



Table 3: Example of an Action Plan for managing effluent on a dairy farm

Land Unit No.	Risk group (appx. 2)	Overall risk	Activity group (Appx. 4)	Activity sub-group (Appx. 4)	Specific action	Map no.	Category	New or existing	Implementation timeframe	Regulatory action type
# 1	Nitrogen groundwater and surface water Pathogen groundwater and surface water	High risk of nitrogen and E. coli entering groundwater and surface water if the system is not well maintained or managed.	Effluent	Storage, treatment, and application infrastructure	<p>All effluent is contained in an impermeable storage facility that was HDPE lined in 2015.</p> <p>The dairy effluent storage calculator was used to determine an appropriate amount for storage for the herd size and climatic conditions on farm and the pond has been built to accommodate this.</p> <p>The effluent pond level is managed so there is a minimum of 14 days storage in case of pump or irrigator breakdowns.</p> <p>Water from the shed and yards is diverted when yards not in use. Green wash is used to initially clean the pad, it is captured and returned to a storage tank to reduce the overall amount of effluent water going to the pond each day.</p>	1	Regulatory action	Existing	Ongoing	Consent condition
				Storage, treatment, and application infrastructure	The effluent system is performance tested annually by the farmer by following the DairyNZ Effluent Spreading Depth Test Calculator. This will calculate distribution uniformity, application intensity (mm/hour) as well as application depth. If the test shows poor system performance or excessive application rates and depths, maintenance is undertaken and settings reviewed to ensure there is even application and no future losses to ground water or surface water.		Catchment action	New	August 2024 and then again annually.	
				Application management	Develop a system that quantifies soil moisture, so that effluent is only applied when there is an adequate soil moisture deficit to allow for the depth of effluent being applied without exceeding field capacity.		Catchment action	New	August 2024	
				Application management	Staff with effluent management responsibilities are fully trained in their duties in relation to this activity. A comprehensive effluent management plan, including staff training, is kept in the cowshed and is accessible to staff.		Supplementary action	New	October 2024	

Relationship between freshwater farm plans and other regulations

In some instances, you will be able to use your freshwater farm plan to meet other freshwater regulatory requirements (for example regional plan rules, national environmental standards, regulations under section 360 of the RMA). This applies only to requirements where that regulation specifically allows for a freshwater farm plan pathway to be used.

As of August 2023, the only regulations allowing for this pathway is the Intensive Winter Grazing Regulations (Regulations 26-31) as per the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F). If you intend to use your freshwater farm plan to achieve compliance with this regulation you need to:

- Check that your regional or unitary council is allowing this pathway to be used. If they are, refer to their guidance.
- Tell your certifier you intend for your freshwater farm plan to achieve compliance with these regulations.

Mapping of new physical works

A freshwater farm plan must contain maps that show your intended new physical works (if any) to be undertaken on the farm to ensure you deliver on your Action Plan. This map will be a key assessment tool for auditors when they assess compliance with the Action Plan.



Sharing your Plan with others

In the preparation of your freshwater farm plan, you may consult other owners and staff. It is important that once the freshwater farm plan has been certified, you ensure all these other people understand the on-farm risks to freshwater and the Action Plan.

By ensuring others with involvement in your farm operations and management understand the freshwater farm plan, they can help you implement the Actions through their daily farm tasks and decision-making.

This will reduce environmental harm and help you achieve an A grade at audit.

Keeping evidence for auditors

Your freshwater farm plan will need to be audited within 12 months of certification; it will then be audited at intervals based on the audit grade you receive.

It is important you collect evidence to demonstrate that you are following your Action Plan.

Evidence can come in many forms. The table below lists some types of evidence you can collect and examples of what the evidence could prove.

Evidence should be stored electronically when possible (photos of receipts, scan copies of paper reports etc). Saving evidence electronically makes it easier for you to find and share it with the auditor. It also means the information can be shared prior to their arrival on farm which allows them to focus on key areas on farm during the audit.

EVIDENCE TYPES	EXAMPLES
Receipts	Purchases of trees for riparian/erosion planting Monitoring services provided by third parties or consultants
Photos	Before and after photos of works (e.g., photos of buffer strips or fencing along water ways)
Results of any testing undertaken	Soil tests Water quality monitoring
Reports	Irrigation system performance assessment reports Third party written advice and assessments of efficacy for management actions Fertiliser equipment calibrations and proof of placement
Monitoring records	Soil moisture monitoring Fertiliser application dates and amounts Stocking rate Maintenance logs
Staff protocols	Documented procedures(e.g. how staff are required to undertake a task)
Works/actions completed map	Visual summary of achievements over time since Plan was first made(e.g. updated farm maps)

Certification and audit details

When writing your Plan, you must include a way of capturing the following certification and audit details in your Plan as received from your certifier or auditor:

- The date of each certification and audit
- The name and identification number of each certifier or auditor
- The conflict of interest declaration of the certifier or auditor
- The due date for the next audit
- The date by which the Plan must be resubmitted for recertification

You also need to include your audit report as received from your auditor including:

- Individual actions that have been implemented
- Individual actions that have not been implemented and the reason for not implementing them
- The audit grade

This can be achieved through a table at the front or back of your Plan.

Maintaining your Plan

Farm operators are responsible for keeping the freshwater farm plan fit for purpose by making changes to the Plan as necessary to comply with any changes to the Act or regulations.

Farm operators must amend and recertify their freshwater farm plan if any circumstances prescribed by regulations apply.

Please read the [System Overview Guidance](#) Part 6 “When is recertification required?” for details.

Link: www.environment.govt.nz/publications/freshwater-farm-plan-system-overview

Your next steps

Congratulations on having worked through this guide. You may now have your full freshwater farm plan ready for certification, parts of the Plan completed, or information gathered ready to take to a rural advisor to finish on your behalf, or a better understanding of what’s going to be required helping you to engage a supplier to write your entire Plan with your support and knowledge.

When all the required parts of your freshwater farm plan are complete, you are ready to engage a freshwater farm plan certifier. Details of certifiers appointed in your region are available on your regional or unitary council’s website.

Thank you for your commitment to freshwater protection and improvement.



Appendix 1. Glossary and definitions

The following definitions are those included in the RMA Freshwater Farm Plans Regulations 2023.

Act means the Resource Management Act 1991.

Action, in relation to an action plan,—

(a) means the way in which a farm operator avoids, remedies, or mitigates 1 or more adverse effects on freshwater and freshwater ecosystems; and

(b) includes (without limitation)—

(i) a physical work (for example, fencing or planting):

(ii) a practice (for example, how an activity is undertaken):

(iii) a process or procedure (for example, training staff in how to undertake an activity).

Action plan means the plan set out in a certified freshwater farm plan under regulation 10(see Appendix 2).

Catchment actions are action(s) that address risks to freshwater and freshwater ecosystems that directly relate to the catchment context, challenges, and values; but exclude regulated actions.

Catchment context, challenges, and values includes (without limitation) the following:

- existing local area information (for example, landforms, soil data, climate data, freshwater data, freshwater bodies, priority contaminants, significant sites to the community, significant species or ecosystems):
- identified cultural matters of importance to tangata whenua, including:
 - the cultural significance of the local area
 - the traditional name(s) of freshwater bodies
 - significant sites and species to tangata whenua.
- any freshwater objectives, policies, rules in relevant regional policy statements and regional plans
- any relevant freshwater matters in planning documents that are recognised by each iwi authority and lodged with the relevant regional council
- the National Policy Statement for Freshwater Management and any action plans made by the regional council
- any other secondary legislation made under the RMA relevant to the management of freshwater or freshwater ecosystems.

Certification requirements means the requirements in section 217F of the Act. A full list of the certification requirements can be found in Appendix 2 of the MfE Developing a Freshwater Farm Plan guidance. Link: environment.govt.nz/publications/developing-a-freshwater-farm-plan

Critical Source Area means a landscape feature such as a gully, swale, or depression that—

(a) accumulates runoff from adjacent land; and

(b) delivers, or has the potential to deliver, one or more contaminants to one or more rivers, lakes, wetlands, or drains, or their beds (regardless of whether there is any water in them at the time).

Inherent vulnerabilities mean risks to freshwater and freshwater ecosystems from the biophysical features of the land including from irrigation or drainage.

Land unit means an area of contiguous or non-contiguous land with similar biophysical features.

National Policy Statement for Freshwater Management means the National Policy Statement for Freshwater Management whose approval under section 52 of the Act was notified in August 2020 (as amended or replaced from time to time).

Regulated actions are action(s) that address a risk to freshwater and freshwater ecosystems and relate to a relevant requirement under a specified instrument.

Specified Instrument means any designation, national environmental standard, national planning standard, regulations made under Part 14, resource consent, rule in a plan, or water conservation order.

Supplementary actions mean actions that address risks to freshwater and freshwater ecosystems; but excludes catchment actions and regulated actions.

Te Mana o te Wai has the meaning set out in the National Policy Statement for Freshwater Management. www.environment.govt.nz/publications/essential-freshwater-te-mana-o-te-wai-factsheet/

Appendix 2. Inherent vulnerability examples

The following table contains a non-exhaustive list of possible on-farm inherent vulnerabilities. Its intent is to get you to consider the vulnerabilities of different biophysical factors, cultural sites, species of significance as well as irrigation and drainage.

You can also include inherent vulnerabilities not identified in this list in your Plan.

Inherent Vulnerability type	Specific Vulnerability
Soil characteristics	<p>Vulnerable to soil compaction leading to increased risk of contaminant runoff surface water.</p> <p>Vulnerable to erosion leading to sediment losses to surface water.</p> <p>Vulnerable to contamination of surface water through pathogen runoff.</p> <p>Vulnerable to contamination of surface water through phosphorous runoff.</p> <p>Vulnerable to contamination of surface water through nitrogen runoff.</p> <p>Vulnerable to contamination of groundwater through pathogen leaching.</p> <p>Vulnerable to contamination of groundwater through phosphorous leaching.</p> <p>Vulnerable to contamination of groundwater through nitrate leaching.</p>
Slope	<p>Vulnerable to erosion leading to sediment losses to surface water.</p> <p>Vulnerable to contamination of surface water through pathogen runoff.</p> <p>Vulnerable to contamination of surface water through phosphorous runoff.</p> <p>Vulnerable to contamination of surface water through nitrogen runoff.</p>
Landform	<p>Vulnerable to high water tables leading to increased risk of contaminant losses to surface water.</p> <p>Vulnerable to flooding leading to increased risk of soil and contaminant loss to surface water.</p>
Climate	<p>Vulnerable to flooding leading to increased risk of soil and contaminant loss to surface water.</p> <p>Vulnerable to erosion leading to sediment losses to surface water.</p> <p>Vulnerable to contamination of surface water through pathogen runoff.</p> <p>Vulnerable to contamination of surface water through phosphorous runoff.</p> <p>Vulnerable to contamination of surface water through nitrogen runoff.</p> <p>Vulnerable to contamination of groundwater through pathogen leaching.</p> <p>Vulnerable to contamination of groundwater through phosphorous leaching.</p>

	Vulnerable to contamination of groundwater through nitrate leaching.
Groundwater	Vulnerable to contamination of groundwater through pathogen leaching. Vulnerable to contamination of groundwater through phosphorous leaching. Vulnerable to contamination of groundwater through nitrate leaching.
Irrigation	Vulnerable to contamination of surface water through pathogen runoff. Vulnerable to contamination of surface water through phosphorous runoff. Vulnerable to contamination of surface water through nitrogen runoff. Vulnerable to contamination of groundwater through pathogen leaching. Vulnerable to contamination of groundwater through phosphorous leaching. Vulnerable to contamination of groundwater through nitrate leaching.
Drainage	Vulnerable to contamination of surface water through pathogen runoff. Vulnerable to contamination of surface water through phosphorous runoff. Vulnerable to contamination of surface water through nitrogen runoff.
Significant site	Vulnerable to loss of significant community or cultural sites, e.g., swimming holes, mahinga kai sites, and wahi tapu sites.
Significant species	Vulnerable to loss of significant habitat or species, including taonga species, e.g., fish spawning areas, threatened or treasured aquatic habitats and freshwater species.
Connectivity to water	Vulnerable to soil compaction leading to increased risk of contaminant runoff surface water. Vulnerable to erosion leading to sediment losses to surface water. Vulnerable to contamination of surface water through pathogen runoff. Vulnerable to contamination of surface water through phosphorous runoff. Vulnerable to contamination of surface water through nitrogen runoff.
Vegetative cover	Vulnerable to erosion leading to sediment losses to surface water.
Hydrology	Vulnerable to flooding leading to increased risk of soil and contaminant loss to surface water.
Hydrogeology	Vulnerable to high water tables leading to increased risk of contaminant losses to surface water.

Appendix 3. Risk Groups

The following table contains a non-exhaustive list of possible Risk Groups you should consider.

Risk Group
Select one or more
Impact on species significant to tangata whenua
Impact on threatened species
Impact on site(s) significant to tangata whenua
Impact on area of indigenous biodiversity
Impact on recreational site
Nitrogen – groundwater
Nitrogen – surface water
Phosphorous – groundwater
Phosphorous – surface water
Pathogen – groundwater
Pathogen – surface water
Sediment
Other...

Appendix 4: Farming and Growing Activities

Activity Group	Activity Sub-group
<i>Select one or more</i>	<i>Select one or more (within corresponding activity group)</i>
Nutrients	Nutrient management
	Nutrient storage and loading locations
	Nutrient application
Land and soil	Cultivation
	Earthworks
	Erosion control
	Pasture and grazing management
Intensive winter grazing	Site selection
	Crop establishment
	Grazing management
	Post grazing management
Waterbodies and wetlands	Stock exclusion management
	Riparian management
	Drain management (channels and sub-surface)
	Critical source area management
Point source	Tracks and gateways
	Troughs and stock camps
	Stock waterbody crossings
	Yards, feed pads, and barns
	Silage pits and feed bunkers
	Farm dumps
	Offal pit
Hazardous substances	Fuel and agrichemical storage
	Agrichemical use
	Agrichemical disposal
Effluent	Storage, treatment, and application infrastructure
	Application management
Water use	Take and application infrastructure
	Use management
Irrigation	Take and application infrastructure
	Application management
Other...	Other...