

FARM ENVIRONMENT PLAN

2016 Shareholder Guide

Audits - Technical Support - FEP Content & Process



ACTON FARMERS
Irrigation Cooperative Limited



Our Vision

Barrhill Chertsey Irrigation Limited (BCIL) and Acton Farmers Irrigation Co-Operative Limited (AFIC) have a commitment to the community. Our vision is to provide positive economic, environmental and social solutions in response to the challenge of sustainably managing our community's water resource through employing a combination of outstanding technology, people and governance.

Our shareholders are leading the way of environmental management in Canterbury, demonstrating the community's faith in allowing us to use their water resource responsibly has been well founded. Without their co-operation and willingness to get on board with our programme, none of our achievements would have been possible.

Scheme Progress

BCI and AFIC are the first schemes to complete FEPs and start the auditing process under the Land and Water Regional Plan. Based on our survey, we have already made significant improvements in raising awareness and implement on-farm change to meet Good Management Practice.

As of April 2016 over 60 FEP audits have been completed, with another 70 to go by the end of the year. Most audited properties achieved a "B" grade and need improvements in irrigation scheduling and calibration. With just a bit of effort in these areas, many "B" grades should be well on track to achieve an "A" by their next audit.

2016 FEP Update

FEPs are living documents and need to be regularly updated to reflect your current farming operation and include new good practices as they become available.

The 2016 BCI FEP Update includes major changes to the risk management sections to better reflect the FEP Audit and Industry Agreed Good Management Practice (GMP) Guide. The update also makes it easier to have multiple properties in the same FEP, target questions only where they are relevant and make it easier to complete if you are a small holding or managed under Synlait's Lead with Pride programme.

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Audits

The BCI and AFIC are required to audit 50% of existing shareholders' FEPs and all new shareholders' FEPs by the end of the year.

Arranging the audit:

We aim to give you at least two weeks' notice prior to your audit, we will try to work with you to arrange a suitable time, however, it is important that you try to prioritise the audit. We will discuss with you what prep you need to do when we book the audit. If you cancel or repeatedly defer your audit you may receive an automatic "C" grade.

How the audit works:

The auditor will come out to your property, sit down with you and any relevant FEP implementers (E.g. Managers, Leasees, Sharemilkers etc) and discuss your farm and your systems. They will review your relevant records and look about the farm.

What does the audit assess?

Only areas relevant to your farm will be assessed, the auditor will look at your key management areas:

- Irrigation
- Nutrient
- Soil
- Waterbodies
- Point Sources
- Water Usage (Ex Irrigation)
- Animal Effluent

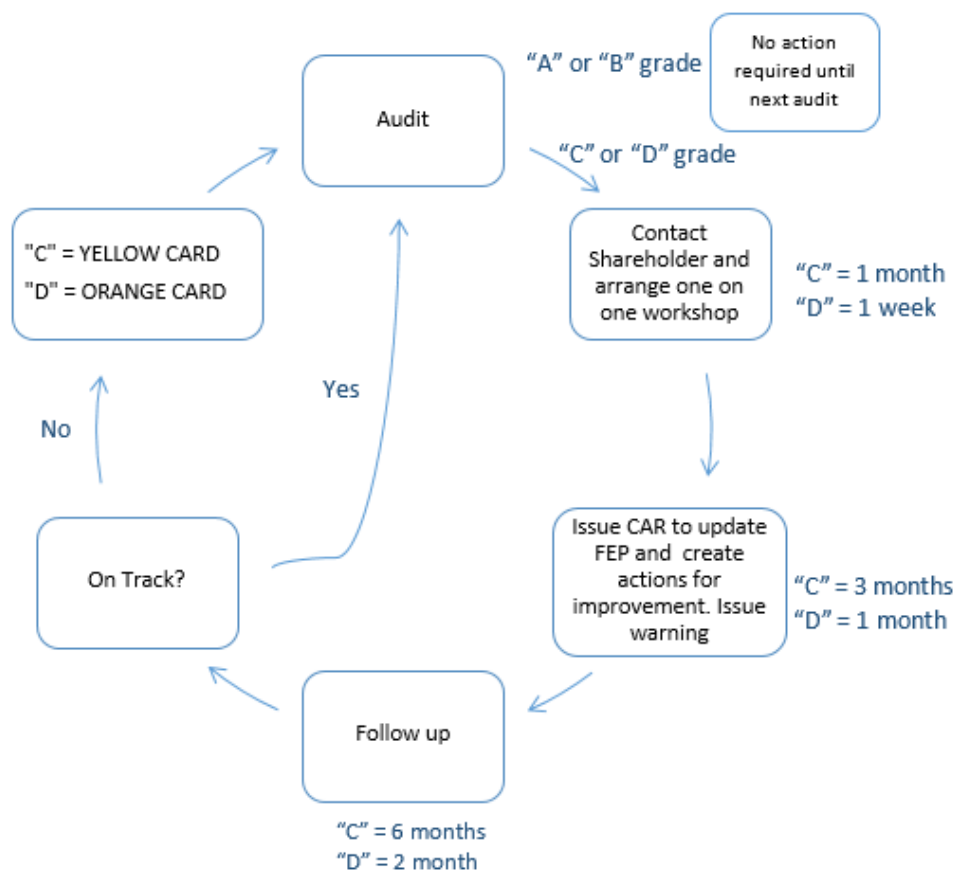
Audit Grading:

The audit and grading system have been developed as a standardised process, this will be used across the board in Canterbury. The auditor will use a Level of Confidence judgement when making a decision of whether or not the farm is on track to meeting Good Management Practice (GMP). The more records and evidence you have to support your management decisions, the more likely that the Auditors Level of Confidence will be improved. After the audit you will then be given a grade, A, B, C or D. This grade will determine the return period of the auditor.

Grade	Frequency of Audit	Change in Management and/or Farm Systems
A	4 years	1 year
B	2 years	1 year
C	1 year	1 year
D	6 months or sooner	6 months or sooner

What your FEP Audit Grade Means to BCI and AFIC

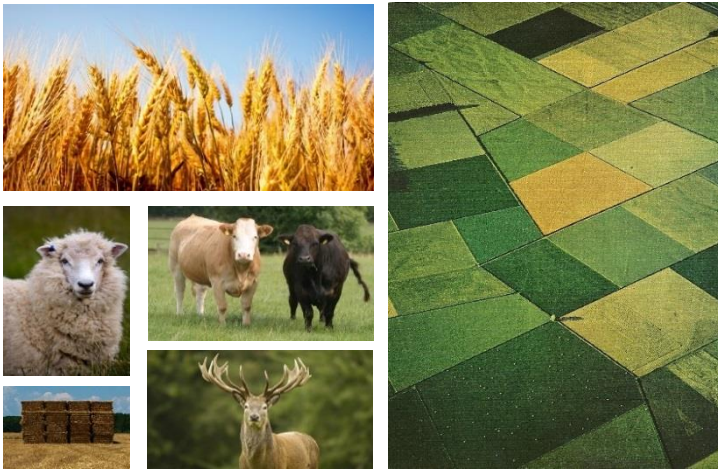
BCI and AFIC are required to follow up with shareholders who receive a "C" or "D" grade audit to make sure the reasons for these grades are acknowledged, with a plan in place to address key areas for improvement. Repeated "C" or "D" grades will initiate our internal compliance processes as set out below.



Records for your Audit:

It is important that you keep records as evidence of your Good Management Practices for your audit.

- In sections 12-17 there are lists of suggested records beneath each related target.
- A list of 'useful' records can be found on the BCI website: www.bci.water.co.nz
- You can contact Eva Harris if you would like further information on the type of records you could keep.



More information regarding the FEP audits and the FEP process is available at www.bciwater.co.nz – Farm Environment Plans

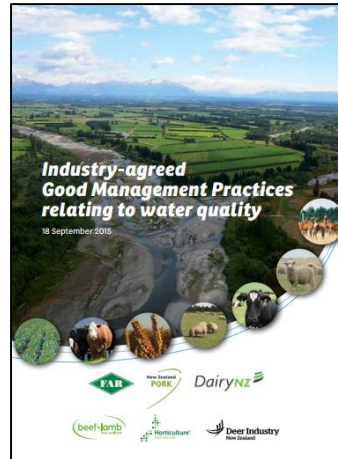


Good Management Practice (GMP)

What is Good Management Practice?

- Good Management Practice (GMP) is a set of standards developed by your industry representatives. GMP will be applicable to all farms in Canterbury from June 2016.

It is worth considering what the GMPs are, that way you can identify which GMPs you may already be doing.



Why does it matter to me?

- GMP will be assumed when calculating the load limit for BCI's consent renewal in 2018.

Therefore everyone needs to operate at GMP for BCI to continue to comply in the future. BCI and Acton require all shareholders to operate at GMP. This means GMP is applicable to all shareholders.

Examples of GMP:

GMP is expected for all new shareholders & all existing shareholders need to be on track.

- An irrigation and effluent system designed and maintained to the code of practice
- Only use the water, effluent and fertiliser you need, where you need it, when you need it. (A GMP that LMUs can assist with)
- Nutrient budgets are prepared annually, are based on soil sampling results and inform fertiliser decisions
- Stock excluded from all waterways
- Records kept as evidence to support management decisions
- Annual calibration of irrigation systems (bucket testing)
- Soil Moisture Monitoring or Scheduling Service

Identify

Relevant GMPs or
GMPs you are already
doing but not recording

Implement

GMP on farm

Record

Practices as evidence

Nutrient Budget Requirements

All farms:

- A 2015-16-year *end* nutrient budget is due by **30 August 2016**. In order to make this process faster and easier, we have an agreement with Ballance and Ravensdown to prioritise our scheme shareholders and to share information.

New Shareholders or significant farming change:

- If you are a new shareholder or have had a significant change in farming system a *predictive* budget is required.

Scheme Expectation for your Nutrient Budget

1. All shareholders must complete a nutrient budget annually to ensure that BCI is able to report on total nitrogen losses.
2. Your nutrient budget is completed by a Certified Nutrient Advisor (CNMA) or other equivalently qualified person
3. Keep accurate records throughout the year of: stocking rates, fertiliser, crops inputs and irrigation.
4. The nutrient budget is to be provided in an auditable format

Making the process easier

In an effort to reduce duplication and save on time, BCI & AFIC have an understanding with Ballance and Ravensdown in which they will provide the budget to us directly in the format we require.

- **Once received we will upload the nutrient budget into your FEP and complete the nutrient budget section.**

If you are using another business make sure they have your permission to pass on the budget to avoid any later delays. We have templates available for you to record your nutrient budget info. www.bciwater.co.nz – FEP Resources – Nutrient Budgets



Land Management Units

“A homogeneous block of land that responds in an alike way when under similar management”

What is an LMU?

Understanding and considering the way different parts of your property respond to different management techniques is important for achieving production goals, reducing costs and identifying environmental risks. The environmental risks can vary on different parts of your property so it is important to consider each of the areas separately.

- LMUs are as much maintaining or improving production and reducing costs, as for mitigating environmental risks.

Creating LMUs

LMUs are best assessed based on a combination of physical factors – E.g. soil type, topography or aspect. And major management factors – E.g. dryland vs irrigated, effluent vs non-effluent, cropping vs pasture.

Questions to ask yourself:

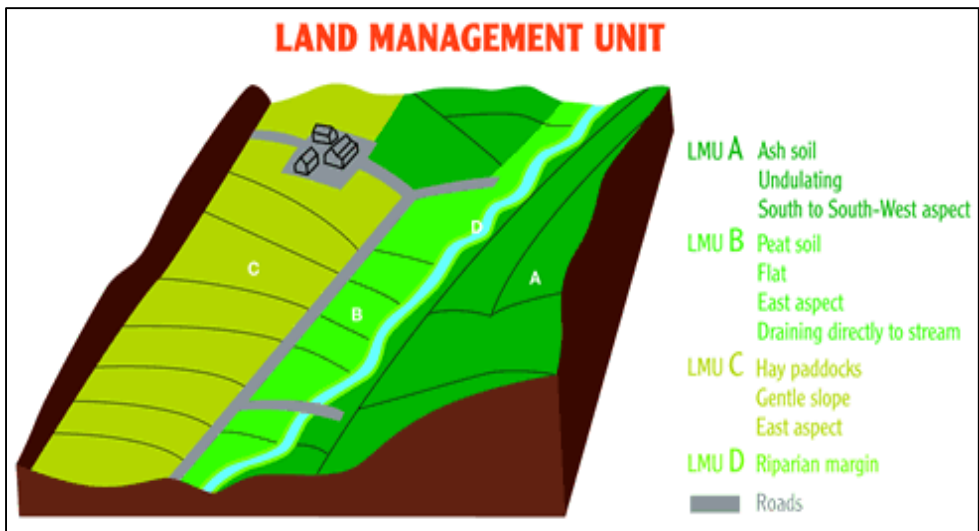
- Is all of the area managed in exactly the same way?
- Will all parts of the property or block respond to fertiliser and nutrients in the same way?
- Do the areas share the same environmental risks...leaky soils, nutrient & sediment runoff or soil loss etc.

When completing your FEP, if you would like assistance with this section and creating the LMUs for your property, please contact Eva – 027 550 0129 or eva@irrigo.co.nz to book a one on one.



Still not sure what to do?

1. Take a look at a map of your farm and mark out some things that you already know, where do you irrigate, crop or spread effluent? Are there areas where run-off is an issue? Are there areas that you already know respond differently to nutrient input?
2. Now, look at the unseen characteristics, what is the soil type/s? Do they vary? Enough to make a significant difference? Does a particular area receive more rainfall, wind or sun?
3. Mark the unseen things down on the map – is there any correlation between the characteristics you have marked out?
4. What could you do to manage these areas differently? Would they respond differently under altered management?
5. Also note on the map any areas of environmental significance e.g. waterways, swamps, places where the water table is a naturally high etc.
6. Similarly, mark out any areas on the map that are potential 'hot spots' for discharge – could these effect the surrounding area in anyway? E.g. Silage pits, offal pits, feedpads, chemical storage and effluent storage etc.



Some farms will have many LMUs & some may only have one or two

Critical Sources – Area vs Point

Point Source Discharge

Point Source Discharge is a defined point or place which discharges occur from. E.g. a silage pit or a rubbish/offal hole.

Critical Source Area (CSA)

A critical source area is a landscape feature like a swale, gully or depression, which accumulates water during rain events that flows in from the surrounding areas. The accumulated water is then delivered naturally or via an artificial waterway to a waterbody. Critical source areas typically collect pollutants – natural and manmade from a large area.

A critical source area is also known as a non-point pollution source.

$$\text{CSA RISK} = \text{Soil} + \text{Slope} + \text{Moisture} + \text{Stock}$$

CSA & Environmental Risk

The type and intensity of environmental risk from a CSA depends on several factors.

A CSA can become a problem when:

1. Cultivation or winter grazing are carried out nearby or within a CSA.
2. The CSA is fallow, either due to stock, harvest or cultivation
3. Seasonal wet periods like winter or spring.



Technical Support

Completing this at home? - Computer Tips

Use the web browser Google Chrome instead of Internet Explorer or Safari (You can search for 'Google Chrome' on Google and follow the download instructions)



Not using Chrome?

-Hit "Delete" instead of backspace if you make a mistake

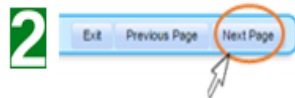
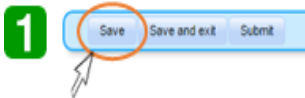
Apple Products:

-The FEP template will not work on any type of Apple product.
(iPad, MacBook, iPhone etc)



Finished a page?

- Click "Save" after you complete a page, then click "Next Page."



Can't see your whole answer?


- You can expand the boxes that you write your answers in:
Click and drag the bottom right hand corner of the answer box where the // lines are. This should expand the answer box so you can see your whole answer.

Internet Connection

- The template requires a good internet connection. If you have a slow or unreliable connection, you can come into the Irrigo offices to use the wifi or book a one on one.



More Information for a Question

Hover your mouse over the lightbulb  icon for help


Submitting your FEP

When you have completed your FEP press “Submit” – this then alerts us that the FEP is ready to be checked and finalised.


Why won't it submit?

- Is the submission error report telling you to complete a question you can't see?
You probably opened up a hidden set of questions by accident and started to answer. Just open it up again, clear all responses and close them again.
- Make sure you answer every question and fill in every field, even if the answer is "no" or “not applicable”.
- Use "0" for numeric fields which are not relevant.
- Go through your whole FEP and make sure you have answered all questions with a red underline and highlighted orange

all shareholders to achieve a Compliant or Non-Compliance (No Action Required) grade for all resource consent(s).

Do you hold any ECan resource consents onto the property managed by this FEP? 

It's a slow process – have patience!

- For dropdown list answers, wait until the blue box disappears before carrying onto the next question 
- For multi-choice answer, count to 5 before selecting your next choice if they don't stay. You may even need to go back to confirm your answers were registered.
- To navigate between different sections, make sure you click on the text (not the space) and the loading screens comes up

Further Information

There are resources available on the BCI website regarding FEPs, Nutrient Budgets, Good Management Practice and the FEP Audits.

www.bciwater.co.nz alternatively you can contact Eva 027 550 0129 or eva@irrigo.co.nz for information or to book a one on one to complete the FEP

Finding your FEP

Where can I find my FEP?

1. <http://www.bciwater.co.nz/> - Click "LOG IN TO WATERLINE ONLINE"
2. <http://orders.irrigo.co.nz/waterline/> - LOGIN

Step 1:

- Login using your Client Number - this can be found in the letter you received regarding the update.
- Your PIN is 9999 – unless you have changed it previously. We can reset this if you have forgotten.

Step 2:

- Click the "FarmEnvPlans" tab



Step 3a: Update FEP

1. You will see an option for either Acton or BCI.



2. Select your relevant plan

Step 3b: Create New

3. If you are creating a new FEP select "Create New"

FEP Update: 2016

What's changed?

- Major changes, particularly in section 12-17 regarding how environmental risk is identified and managed. This is in order to allow the template to be more flexible for a variety of farming operations.
- Easier to have multiple properties managed under one FEP

Section 1 – 4

Contact, Property & Land-Use Information

The purpose of these sections is to get an overall understanding of your farm, what type of operation it is and what the management structure is.

Updating: This information should be prepopulated from your previous FEP. Please check that it is all correct, if not please update to include any information for new land or properties.

Section 5

Resource Consents

Compliance Monitoring Reports

- Irrigo will contact ECan on your behalf and obtain the most recent compliance monitoring reports, we will upload these into your FEP for you.

Existing Resource Consents

- **Updating:** If you uploaded copies of your resource consents into your previous FEP they should appear within your update. Please check that these consents are still correct and are entered appropriately.

New Resource Consents

- If you have any new or changed consents since your last FEP please ensure these are uploaded into the FEP.

Section 6

Irrigation System Description

- **Updating:** This section should be populated with the information from your last FEP. Please check that this information is still correct.
- **New Irrigation:** If you have had any new systems commissioned since your last FEP was submitted please update this section appropriately.

Section 7

Nutrient Budgets

Once received, Irrigo will upload your nutrient budget and complete this section for you.

- **Refer to page 8 for more information regarding nutrient budgets; the budget requirements and the time frames.**
- Please make sure your representative has permission to send us your budget directly.

Section 8

Other Farm Environment Plans

- **Synlait's Lead with Pride** is currently the only accredited FEP programme. If you have completed another FEP template, please make sure you complete our FEP and participate in our audits.

Lead with Pride FEPs

1. If you have participated in the Lead with Pride FEP program, please only complete sections 1 – 8 & 10 of our FEP.
2. For sections 12-17, please select “No” to the first question that appears.
3. You can then submit the FEP

Permitted Activity

1. If your farm is a permitted activity, please only complete sections 1-8 and section 10 of our FEP
2. For sections 12-17 please select “No” to the first question that appears.
3. You can then submit the FEP.

Section 9

Environmental Risk Identification - LMUs

- **Updating:** LMUs identified last year will be prepopulated. Please check that these LMUs are still correct and marked on your farm map.
- **Creating New LMUs:** Refer to page 9 for more information on how to complete the Environmental Risk Identification section and how to create LMUs for your property. Please mark LMUs on your farm map.

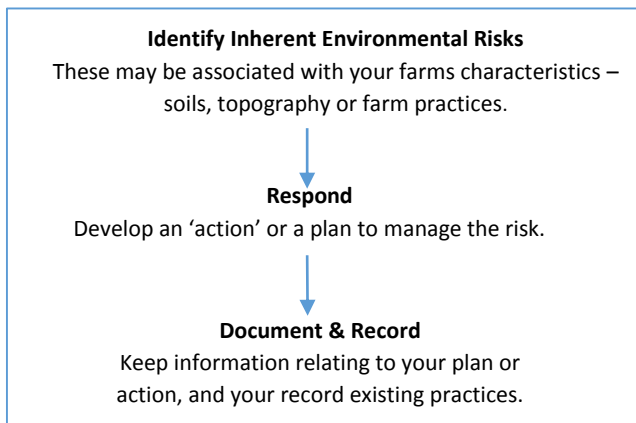
What is Environmental Risk?

In terms of environmental risk some combinations of irrigation systems, soils and stock will be harder to manage than others. The risk/s are present regardless of how you manage it. For each LMU you must assess the environmental risk.

Each LMU you create will have a unique environmental risk/s because of its natural characteristics and the farming practices. It is important that you still recognise the risk even if you are already applying good management practice.

Ranking the LMUs

1. Think the LMUs and their inherent environmental risk. Some of these risks are harder to manage than others. Consider why you decided on your LMUs? What were their inherent environmental risks?
2. Compare all of your LMUs, which has the greatest risk – regardless of what your management strategies.
3. Rank each LMU in the section

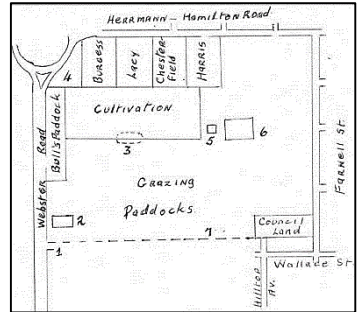


Section 10

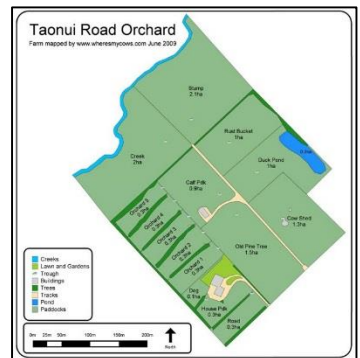
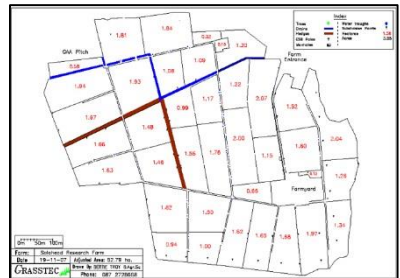
Farm Maps

Identification of risks is an important part of being able to manage them effectively. Section 10 requires you to upload a farm map for each property managed under the FEP that includes the following, if present:

Updating: Please check your map is still up-to-date and identifies the following:



- ✓ **Irrigated Area by Type**
- ✓ **2016 Winter crop areas**
- ✓ **Land Management Units (LMUs)**
- ✓ **Effluent Application Areas**
- ✓ **Raceways, tracks, crossings, bridges, culverts and underpasses**
- ✓ **Point Source Areas**
 - Silage Pits
 - Offal/Refuse Pits
 - Stock Yards, Feeding or Stand-off areas
 - Fertiliser/Chemical Storage
 - Septic Tanks/Soakage Areas
 - Soakholes
- ✓ **Water**
 - Critical Source Areas
 - Bores/Wells
 - Stock water races
 - Rivers, streams, lakes, drains, ponds and wetlands
 - Riparian areas and water body fencing
- ✓ **Significant indigenous biodiversity sites as identified in District plan**
- ✓ **Covenanted & High Value areas**
- ✓ **Areas under Development**
- ✓ **Property Boundary**
- ✓ **Shelter Belts, Plantations**



Section 11

2015-16 FEP Actions & Audits

Incorporating your Existing Actions:

Updating: In your last FEP you would have created a series of actions, it is important that you bring actions still in progress into your updated FEP.

- A copy of this 'To-Do' list of actions has been uploaded onto your FEP
- If you have completed an FEP audit, we will upload a copy of your audit report.

Sections 12 – 17

Environmental Risk Management

The purpose of the FEP isn't to pass or fail you but to identify whether or not you are meeting GMP. Sections 12-17 show you how to minimise risk from your LMUs through GMP and create a plan if needed.

Why Identify & Manage Risks?

You can't manage what you don't know. The FEP helps you to identify where you need to focus your efforts in order to maximise efficiency and minimise losses.

What are the Objectives & Targets?

The objectives and targets in the updated FEP are prescribed by ECan Land and Water Regional Plan (LWRP), they are standardised targets across Canterbury that all farms must meet.

The targets are essentially your 'Goal/s,' the questions are intended to see where you are at with regard to meeting the 'goal/s,' and to give you an idea/s of what you could do to improve or to meet the target.

My Evidence

After each target there is a suggested list of documents which can be used as your 'evidence' to show that the target is being met to the level that you have indicated. **Pay attention to what some of these documents are – many of them are easy to collect, and it is likely you are already collecting some unknowingly.**

Managing Environmental Risk

Selecting Applicable Objectives:

The next few sections are broken up into the management objectives, and are based around the risks you identified in your LMUs. The following question are to compare how your practices compare with GMP.

- As you start each new section select if the objective is applicable
- Remember – environmental risks are still a risk even if you are already operating at GMP.

Are Irrigation Good Management Practices applicable to this FEP? Yes ▼

Relevant LMUs:

You will be asked to input which LMU/s the objective is applicable to. There may only be one applicable LMU or there may be several.

For Example: A farm has an LMU – LMU 1, in this LMU there is a particularly stony soil, meaning it has a low water holding capacity and a tendency to leach nutrients easily. LMU 1 would then be relevant for the water and nutrient sections.

List of Current Practices:

This is a summary of all your current practices you have described in the above questions. These are the practices which are already undertaking to meet GMP. E.g. Summarise what you are currently doing.

Make sure you keep records to show you continue with these practices.

Evidence:

There is a list of suggested documents for each target, these documents and records can be used in your audit as evidence to back up management decisions and actions. If you list a document as evidence the auditor may ask to see this in the audit.



FEP Actions

Why have an Action?

Throughout S.12-17 there are opportunities to create 'Actions.' The actions are prescribed by you, and should have a realistic timeframe to achieve GMP. **An Action shows how you are planning to meet GMP in the future.**

Types of Actions in the FEP

✓ **In-progress Actions:**

It is important that you continue your actions listed in last year's FEP. Just include them as if they were a new action. You may want to reassess the timeframe. Remember, your actions will be assessed in your audit.

✓ **Audit Actions:**

If you have completed an audit, your auditor may have given you some required or suggested actions. These can be included in the same way as your existing actions are included.

✓ **New Actions:**

There may be a new possibility or venture that you want to investigate, or practice your plan on implementing on your farm. Creating a new action under the related target is a good place to record this plan.

Action 'To-Do' List:

Once you have completed your FEP you will receive a summary list of your actions. You will be able to see this list on the front page of your **FarmEnvironment** tab in WaterLine, and you will receive a summary email.

The actions and your progress in their completion will be assessed in your audit, as well as your current practises.



Creating an Action

Your actions will be entered into Sections 12-17 to show you intend to meet GMP. After each target you will have an opportunity to create an action.

Each action needs:

1. An action or plan
2. Someone who is responsible for its implementation.
3. A timeframe

Creating an Action

Example Situation:

An arable shareholder with a potential risk of erosion – both wind and water. Erosion is sometimes exacerbated during periods of fallow. A plan/action has now been made to move towards good practice.

- **Action:** Use a crop cover to help avoid wind erosion
- **Responsible:** Leasee
- **Timeframe for Completion:** 15-16 Season

Soils Target 1 Actions:

Use a crop cover to minimise wind erosion

Person Responsible: Leasee

Timeframe for Completion: 15-16 Season



Objectives & Targets

As you progress through the FEP you will be asked if the objective and targets are applicable, if they are please answer the associated questions.

Irrigation	
Objective: To operate irrigation systems efficiently ensuring that the actual use of water is monitored & is efficient	
Target 1:	New irrigation is designed, installed & operated in accordance with industry best practice standards
Target 2:	Existing irrigation systems are calibrated, maintained & operated in accordance with industry best practice standards
Target 3 & 4	All applications of irrigation water are justified on the basis of soil moisture data, climatic information & crop requirements
Target 5	Staff are trained in the operation, maintenance & use of irrigation systems
Nutrients	
Objective: Maximise nutrient use efficiency while minimising nutrient losses	
Target 1:	Nitrogen losses are below or at GMP loss rates for property
Target 2:	Phosphorus & sediment losses from farm are minimised
Target 3:	Fertiliser applied does not exceed crop requirements
Soil	
Objective: Maintain or improve the physical or biological condition of the soils, minimising the movement of sediment, phosphorus & contaminants	
Target 1:	Farming activities are managed so as to not exacerbate erosion
Target 2:	Farming practices optimise the infiltration of water into the soil profile
Collected animal effluent	
Objective: Manage the risks associated with effluent systems to ensure the systems are compliant 365 days a year.	
Target 1:	Effluent storage facilities & discharges comply with regional council rules or any granted resource consent.
Target 2:	Applications of effluent are done in order to minimise the risk of contamination to groundwater or surface waterbodies.

Target 3:	Sufficient and suitable storage is available for effluent
Target 4:	Staff are trained in the operation, maintenance & use of effluent systems
Point Source	
Objective: Manage the number & location of point sources to minimise risks	
Target 1:	All point sources (silage pits, offal/rubbish holes) are managed to avoid direct discharges of contaminants
Waterbody – riparian drains, rivers, wetlands & lakes	
Objective: Manage waterbodies and areas in order to avoid direct inputs of nutrients, pathogens or sediment,	
Target 1:	Stock is excluded from waterbodies
Target 2:	Vegetated riparian margins are maintained to minimise losses to waterbodies
Target 3:	Contaminants sources (farm tracks, gateways, troughs etc) are located so as to minimise the discharge risks.

What do I need to do now?

- Collect all your records for the 2014-15 and 2015-16 seasons
- Book in a time to complete your nutrient budget. (Once completed your Nutrient Budget it will to be uploaded to your FEP by us, make sure your rep has permission to send the budget directly to us.)
- Update you FEP on WaterLine- <http://orders.irrigo.co.nz/waterline/login>

Need Help?

There are many useful resources regarding **Farm Environment Plans (FEPs), Nutrient Budgets, Good Management Practice, Templates and the Auditing** process on the BCI website, www.bciwater.co.nz – *FEP Resources*

If you need any one on one help with completing your FEP, preparing your nutrient budget or for your audit, please contact:

Eva Harris – Environmental Manager

18 Kermode Street
Ashburton 7700

Phone: 03 975 8547

Cell: 027 550 0129

Email: eva@irrigo.co.nz