CRITICAL SOURCE & WET AREA ACTION PLAN

Winton Stream Catchment

Last edited on:

Farm name			
Address			
Contact person			
Phone or email		Total ha	
Farm Type		Effective Area ha	

Your Critical Source & Wet Area Action Plan will help you spot any risks related to sediment, nutrient and E. Coli loss on your farm, and help you keep track of the great things that you are already doing to prevent this. Plus, it will explore some extra actions you could take to further minimise losses. Looking at managing Critical Source areas on farm is a great start to working toward a Freshwater Farm Plan.

Our Catchment

The Oreti Catchment begins in the Thomson Mountains and flows across the Southland Plains into Foveaux Strait via the New River Estuary. The Winton Stream is a tributary of the Oreti River and joins the river just below Winton.

The Winton Stream Catchment has been heavily modified for drainage and flood control to support rural and urban areas. It receives various waste inputs including treated sewage and stormwater. Phosphorus - linked to sediment and E. Coli contamination - is a major concern.

At the bottom of the catchment the New River Estuary is in very poor health due to high levels of nutrients and sediment.

Critical Source & Wet Areas

Critical source areas (CSAs) are like “contaminant highways” - low spots in the land like gullies and swales that channel water and any pollutants into streams.

On farms, CSAs and wet spots can become hotspots for sediment (soil) and nutrients. Activities like winter grazing or spreading of effluent can have a negative influence on these areas.

Fencing off and maintaining vegetation cover, constructing wetlands, sediment bunds and traps, are useful tools to help slow water down, giving nutrients, sediment and E. Coli a chance to settle out and be used by plants.

Winton Stream Marshalling the Best Wetland, Bund & Overland Flow Pathways Mapping Tool

We’ve created an easy-to-use online tool to help Winton Stream Catchment landowners make smart decisions about where to put mitigations, such as, wetlands, detainment bunds and sediment traps on their land.

Developed by the Mid Oreti Catchment Group and Collaborations consultancy, the tool uses topography to show the best spots for these mitigations to be constructed. It highlights flow paths, catchments, CSAs, land features and erosion risks, so you can explore your land in detail and take action to improve your farm and its water quality.

High Risk Contaminant Hotspots

The following areas and activities can lead to an accumulation of exposed soil, E. Coli and nutrients:

- Winter grazing or a newly cultivated paddock
- High traffic stock areas, such as, gateway entrances, water troughs and uncovered yards
- In paddock feed areas
- Silage pits
- Grazing on steep slopes
- Stock campsites, such as, under shelterbelts
- Stock lanes
- Effluent spread areas

Critical Source & Wet Area Planning - Before you head to the paddock

Step 1 - Print out a map of your farm - topo or photo is fine - and identify your main landscape features - creeks, drains, swales, gullies, and any wet or problem areas

Step 2 - Draw on the map any positive actions you have already taken to reduce contaminant loss to waterways on your farm & tick all the good stuff you have done in the Action Plan Checklist (a few pages over)

Step 3 - Have a look at your farm in the Winton Stream Marshalling the Best Tool. Type "Mid Oreti Marshalling the Best Wetland Tool" into Google and it will pop up

Top tip - If you click on the magnifying glass in the top right hand corner of the mapping tool, you can type your address in and go straight to your farm. Click on the legend in the left hand corner to show what the different colours and symbols mean on the map

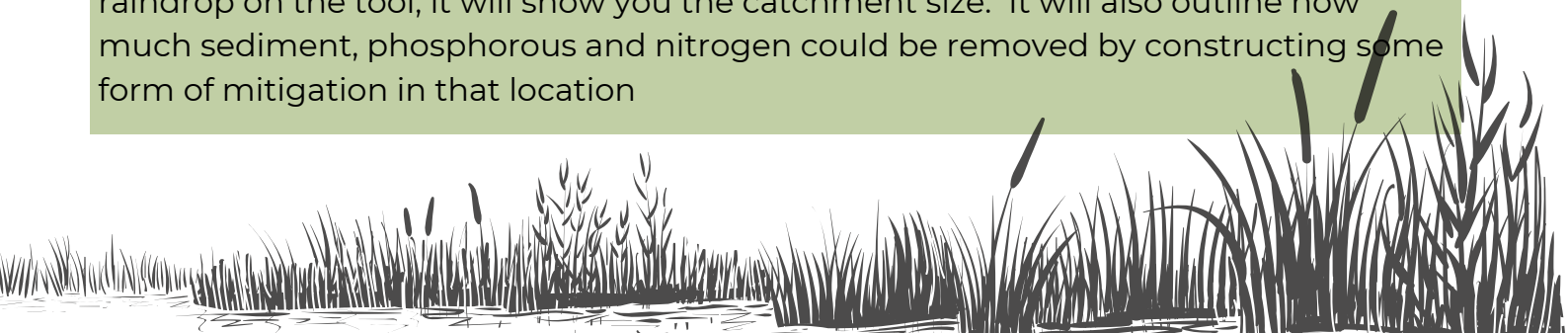
The tool shows flow pathways, potential sites for wetlands, bunds and sediment traps, along with sizing guidance and catchment size. Look at the 2 page tool factsheet for our top tips to use the tool well. The tool and factsheet can be found on the Mid Oreti Catchment Group webpage - https://www.thrivingsouthland.co.nz/mid-oreti/

Step 4 - Have a think. Does your knowledge of the wet areas match what the tool has highlighted? Can you mark any risky spots on your map which are often damp or wet all year round? Are there other places where sediment and contaminants could possibly enter waterways?

Step 5 - From the above investigation pick five sites (small is fine) where you think you could reduce sediment, nutrient and E. Coli run off on your farm

Top tip - We recommend the catchment for these sites is at least 10 ha, as this is more likely to accumulate overland flow and give you a good result for your effort.

If you click on the darkest blue overland flow pathways, the yellow triangle or green raindrop on the tool, it will show you the catchment size. It will also outline how much sediment, phosphorous and nitrogen could be removed by constructing some form of mitigation in that location



Critical Source & Wet Area Planning - Standing in the paddock

Step 6 - Head out to the paddock and and check out your five sites. You could go with someone from your farm team or a mate? The best time is during winter and spring when its cooler and wetter, and you will see the standing water in wet spots. Straight after significant rainfall you should see your overland flow pathways

Top Tip - If you do notice an overland flow pathway after rainfall, mark this out with some standards or bamboo canes to note this area for mitigations at a later date

Step 7 - While standing in the paddock having at look at these areas, have a chat about any practical actions you could take to reduce the loss of soil and contaminants here? How could these ideas work in with your farm system?

Step 8 - Write down your actions:

- Tick off the good stuff you would like to start on your Action Plan Checklist
- Write down any ideas for future actions on your Five Sites Action Plan Table

Step 9 - Pick an action and go for it! Check out the Mid Oreti Southland Wetland Directory for more information about potential mitigations, and talk to people you trust for advice and support, such as friends, Rural Professionals and your local Catchment Group

Step 10 - Check your progress. You could go and have a look during or after rain. Some things to look for are:

- Accumulated overland flow has been slowed down
- Prevent exposed soil by maintaining vegetation cover (grass)
- Sediment (soil) has built up where water has pooled
- Plants, birds, insects and fish are thriving
- Pugging has been reduced
- Overland flows have been intercepted before directly entering a ditch or creek
- Water leaving your mitigation looks cleaner than the water entering

Step 11 - Update your plan once or twice a year to keep track of all the good work you are doing and future areas you want to work on. Don't forget to take photos to remind yourself of the great work you have done and help inspire others!

A special thank you to Nicola McGrouther & the Thomsons Catchment Project (part of the Manuherekia Catchment Group) who inspired us to create our plan after we saw their fantastic Farm Sediment Plans and how they were using them.
We really appreciate your permission and support.

Action Plan - Checklist

Date: Completed by:

Compiled in this checklist are some great ways to reduce sediment, nutrient and E. Coli loss. Tick what you're already doing well and give yourself a pat on the back. Have a look through the list and is there anything you would like to start doing at your five new sites?

Tick if doing	Tick if planned	Actions to reduce sediment, nutrient and E. Coli loss	Comments
		Write a Winter Grazing Plan with actions to minimise runoff to creeks and share it with your team	
		Identify and map critical source areas and problem wet areas - *you can use our new tool to help find them*	
		Temporary fence off critical source areas and wet areas while grazing in very wet events	
		Minimise operation of machinery on waterlogged paddocks	
		Fence stock out of creeks with a grassed buffer	
		Grass buffer and/or riparian planting around creeks	
		Don't cultivate the swales and gullies and add a wider grassed buffer between cultivated paddock and waterways	
		Look after your soils by maintaining good pasture cover, use direct drilling or minimum tillage, and avoid compaction	
		Culverts and bridges for stock crossings (extra brownie points if your bridge has nibs to stop run off!)	
		Tracks and roads – diverting sediment runoff away from creeks diverting to grass and avoiding scouring of tracks	
		Use small and effective interception options like hay bales and rows of Carex where flow pathways cut through shelterbelts to slow the flow	
		Retire, fence and plant out notoriously wet, problem areas, and allow them to revert to wetlands	
		Build small wetlands and ponds where water naturally pools - deep standing water such as a duck pond helps reduce nitrogen	
		Look after and enhance your farm's natural wetlands & avoid doing any earthworks in or near them without checking the rules first	
		Put in a sediment trap or give your sediment trap a birthday by giving it a scrape out!	
		Think about slowing the flow - would a series of detention bunds or sediment traps down a gully work on your farm?	
		Connect with your Catchment Group and attend an event on how to reduce sediment, nutrient and E.coli loss to learn more	

Your Five Sites Action Plan

Ideas for the next steps for your five sites you want to work on to further reduce sediment, nutrient and E. Coli loss on your farm

Review date					
First step & who is responsible					
When would I like to accomplish this by?					
Action					
What is/are the risk/s would like to mitigate here?					
Paddock Number					