

Hot spots

- Ensure silage stacks are at least 50 metres from waterways, with no discharge directly to ground water or within 20 metres of a waterbody.
- Recycle plastic waste from the farm.
- Ensure any offal holes or rubbish pits are at least 50 metres from a waterway and there is no seepage to groundwater.
- Septic tanks should be regularly emptied and well maintained.



Erosion control

- Plant trees on slopes where there is the greatest risk of erosion.
- Retain vegetation cover in gullies to reduce erosion and provide filtering of any runoff.
- Avoid cultivation of areas susceptible to erosion, like riparian margins and steep slopes.



Bank Slumping

- Plant appropriate plants in riparian margins that will help stabilise banks.
- Keep fencing well back from waterways so that bank erosion is reduced, and streams can naturally meander.



Paddock selection for wintering

- Identify winter grazing paddocks early.
- Ideally select paddocks further away from waterways.
- Look for areas at lower risk of pugging and compaction.
- Avoid steep slopes.
- Identify critical source areas and leave these in grass.
- Select paddocks where you can manage sediment loss.



Critical Source Areas

Critical source areas are low-lying parts of farms such as gullies and swales where runoff accumulates. Often these areas have been tilled in the past.

- Runoff from critical sources areas can carry sediment and nutrients to waterways.
- Where possible keep critical source areas uncultivated and ungrazed.
- By managing these areas we can greatly reduce the loss of sediment and nutrients from farms.



Winter intensive grazing

- Work out an access and grazing strategy before putting up fences, thinking about the location of stock water sources and using temporary water troughs if necessary.
- Put supplementary feed out before winter grazing starts.
- Strategically graze paddocks from the top to the bottom or towards the critical source area.
- Back fence stock to prevent them entering previously grazed areas.
- Keep the soil on the paddock.
- Retain a buffer zone along any riparian areas.
- Graze critical source areas last and only if conditions allow.
- Sediment loss can be reduced by up to 90% by adopting strategic grazing methods.



Good Management Practices

SOUTHLAND'S FARMER DRIVEN COMMUNITY CATCHMENT GROUPS

Good management practices are practices which help manage farm resources while minimising environmental risk.

There are many positive outcomes from adopting good management practices on farm, for example:

- Water quality will be maintained and/or improved.
- Complying with national and local regulations.
- Looking after your natural resources.
- Meeting consumer expectations.
- Profitable farming due to improvements in soil management, pasture growth and quality, and animal health.

The sections included in this poster are recommended practices for reducing the potential for our actions to impact on water quality.

These good management practices can be tailored to each farm through a Farm Environment Management Plan.

Southland's farmer driven community Catchment Groups are great places to talk to other farmers about good management practices, and how you can work together to improve water quality in your catchment.

Resources:

Dairy NZ (2016) *Good Management Practices* (Report DNZ40-040) https://www.dairynz.co.nz/media/4106341/Good_management_practices_April_2016.pdf

Dairy NZ (2017) *Wintering on Crops in the South Island* (Report DNZ40-023, Version 2 – January 2017). <https://www.dairynz.co.nz/media/5786508/wintering-on-crops-in-the-south-island.pdf>

Beef + Lamb New Zealand – Environment home page <https://beeflambnz.com/compliance/environment>

Beef + Lamb New Zealand – All you need to know about good practice for winter grazing of crops <https://beeflambnz.com/wintergrazing>

Environment Southland – *Proposed Southland Water and Land Plan* (Decisions Version, 4 April 2018) www.es.govt.nz/document-library/plans-policies-and-strategies/regional-plans/proposed-southland-water-and-land-plan/Pages/default.aspx

Environment Southland – *Farmers' Rough Guide to Environment Southland's Rules* www.es.govt.nz/rough-guide

Environment Southland – *Good management practice factsheets*: www.es.govt.nz/gmp

The Deer Industry Environmental Management Code of Practice https://deernz.org/sites/dinz/files/Deer_EMCoP_Apr%202018_web_interactive.pdf



Project website: www.landcare.org.nz/SouthlandCatchmentGroups

Facebook page: www.facebook.com/Southlandcatchmentgroups

Stock Management

- Fence all stock out of waterways where possible.
- Feed supplements and locate water troughs away from waterways and critical source areas.
- Avoid pugging and soil compaction.
- Ensure deer wallows do not run into waterways.
- Refer to Southland's Water & Land Plan Rule 70 'Stock exclusion from waterbodies' for different stock class exclusion dates.



Effluent Management

- Make sure effluent is not applied directly to, or within 50 metres of a waterway.
- Use low rate effluent applicators, over a large area to capture the benefits of the nutrients.
- Ensure there is no ponding or runoff.
- Have sufficient effluent storage.
- Check the Southland Water & Land Plan to see if you need a consent.
- Check your pond does not leak by getting a drop test done.
- Avoid irrigating over tile drains.



Infrastructure

- Regularly used stock crossings over waterways should have either a culvert or bridge in place.
- Manage farm tracks, lanes, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of runoff to minimise risks to water quality.
- Maintain races and lanes so that effluent goes into a paddock and not a waterway, e.g., installing cut-outs on tracks, and installing sediment traps.
- Ensure all effluent run-off is collected from stock handling facilities.
- Ensure all crossings have a lip or bund on the edge so stock waste and mud cannot enter a waterway.



Fertiliser Application

- Only apply when conditions are suitable i.e. avoid times when soil temperature is too low.
- Don't apply when heavy rain is forecast.
- Have an OVERSEER nutrient budget prepared for the property.
- Keep a buffer around waterways.
- Avoid application to critical sources areas where practical.
- Only apply fertiliser that can be used by the crop or pasture (test soils to check nutrient status).
- Little and often is better than lots now and then.



Biodiversity

- Understand the values of your native area before you change anything. High Value Area surveys can be done at no cost to the landowner.
- Manage or retire wetlands, bogs and swampy areas.
- Protecting native bush can help preserve streams and improve water quality, e.g., QEII covenants.
- Funding is available from Environment Southland for protecting these areas through weed and animal pest control, and fencing.



Riparian Management

- Keep riparian margins wide enough to filter sediment from any run-off.
- Prioritise areas to protect through fencing and planting.
- Consult your local nursery or Environment Southland for advice on the best species to plant in your area.
- Plant trees for shade on north side of streams. This slows down plant growth in the waterway (stopping them becoming choked), but also has the benefit of reducing instream temperature for aquatic life.
- Long grass can be a very effective filter.

