WATER AND LAND 2020 & BEYOND

Overland flow

Overland flow is a key transport pathway for contaminants in the Alpine physiographic zone.

In some physiographic zones, overland flow is a key transport pathway, but only in part of the physiographic zone. The part of the physiographic zone where overland flow is a key transport pathway is referred to as the overland flow variant, or (o). The physiographic zones with an (o) variant are:

- Bedrock/Hill Country
- Gleyed
- Lignite/Marine Terraces
- Oxidising
- Peat Wetlands
- Riverine

Please note

The factsheet on General Good Management Practices is applicable everywhere, and should be referred to in conjunction with this factsheet. There may also be other key transport pathways and associated good management practices which are relevant to your property, depending on which physiographic zones and variants are present.

You can search for your property and view the physiographic zones map on http://gis.es.govt.nz

Some example good management practices for overland flow which could be included in your Farm Environmental Management Plan include[1]:

Mitigation	Example GMPs	✓
Protect soil structure, particularly in gullies and near stream areas	Minimise fence line pacing by deer by creating a visual barrier or separating mobs	
	Use minimum or no-till cultivation practices such as direct drilling	
	Re-sow areas of bare or damaged soil as soon as possible	
	Match stock management to land use capability, e.g. avoid grazing heavy stock on steeper, more vulnerable soils, especially when wet	
	Plant spaced poplars or other poles on steep country	
	Cultivate along contours on sloping ground	
Manage critical source areas (CSA)	Restrict grazing of crop and pasture CSAs when soils are near saturation	
	Avoid working critical source areas and their margins	
	Leave grassed areas (or native vegetation) around critical source areas and margins	
	Plant riparian margins	
	Provide deer wallows away from waterways	
	Move troughs and gateways away from water flow paths	
	Reduce runoff from tracks and races (using cut offs and shaping)	
	Graze from the top of the slope toward the critical source area (such as a stream or gully), or leave a buffer zone to be grazed last	
	Use low solubility P fertiliser if applying to critical source areas	
	Seek advice from Environment Southland Land Sustainability Team to identify critical source areas	
Reduce P use or loss	Reduce use of P fertiliser where Olsen P values are above agronomic optimum	
	Use low solubility P fertiliser forms if runoff risk is high; or fertilise outside risk months (May to September inclusive)	
	Plant split grass/clover swards in near-stream areas	

[1]Regardless of the good management practices chosen, the entire farm environmental management plan must be prepared in accordance with Appendix N. On-farm actions must comply with all relevant rules in the Southland Water and Land Plan 2016, and any relevant resource consent conditions.