

15.0 Discharge of Contaminants to Land

15.1 Introduction

The discharge of contaminants to land is controlled under Section 15 of the Resource Management Act. Section 15 states that no person may discharge any contaminant into or onto land in circumstances which may result in the contaminant or any other contaminant entering water, unless it is expressly permitted by a rule in the Plan or Proposed Plan, a resource consent, or regulations. Section 30(c)(ii) of the Act requires regional councils to control the use of land for the purpose of maintaining and enhancing water quality.

This section sets out the issues, objectives, policies and methods which will enable the adverse environmental effects associated with the discharge of contaminants to land to be avoided, remedied or mitigated such that the life supporting capacity of soil, water and air is protected.

It should be noted that the discharge of hazardous substances has not been listed above because it is covered separately in Chapter 18 of the Plan.

15.2 Issue

The discharge of contaminants to land may create adverse effects on water quality, the life supporting capacity of the soils and amenity values

In the Wairau/Awatere area there are many activities which involve the discharge of contaminants to land. Generally the discharge of contaminants arises from the disposal of solid, liquid or gaseous material, generally in the form of waste. However, contaminants are also discharged through the application of agrichemicals and from day to day land use activities. Some specific examples of activities which discharge contaminants are:

- Disposal of agricultural effluent from dairy sheds, piggeries, and pastoral farming;
- Disposal of animal waste in offal pits;
- Disposal of agrichemicals from animal dips;
- Leachate from agricultural production;
- Application of agrichemicals including pesticides, herbicides and fertilisers;
- Disposal of agricultural and industrial processing waste (eg. apples, vegetable, cheese);
- Discharge of sediments from cropping and stock trampling adjacent to water bodies;

- Disposal of human effluent from domestic and community sewage treatment systems;
- Disposal of waste in landfills and farm dumps, composting and recycling operations;
- Disposal of waste from trade and industrial premises (eg timber treatment); and
- Discharge of contaminants from land disturbance (eg sedimentation).

All these activities have the potential to create adverse environmental effects if undertaken in a certain location or in an uncontrolled manner. Potential adverse effects include degradation of surface and groundwater quality through infiltration and runoff, soil contamination, disruption to land ecosystems and reduction of amenity values. However, some activities, such as the disposal of human and agricultural effluent, can have more significant adverse effects on the environment. It is important that the activities with more significant adverse effects are subject to greater controls.

In certain locations there is also potential for land based discharge activities to have more significant adverse environmental effects. This is particularly the case for landuse activities located over the unconfined Wairau Aquifer, where contaminants can be more easily carried into the aquifer. Given the significance of the Wairau Aquifer for the supply of community drinking water it is important that activities located over the unconfined Wairau Aquifer are subject to more restrictive controls. Activities located adjacent to high value surface water resources or surface water resources which require enhancement should also be subject to greater controls to enable water quality to be enhanced.

Recent growth in the Marlborough economy has led to greater quantities of contaminants being discharged to land, particularly in the form of agrichemicals. Greater volumes are generally associated with more significant adverse effects. The Marlborough Regional Policy Statement seeks to reduce the quantity of contaminants, particularly waste, being discharged to the environment by promoting the principles of waste minimisation and cleaner production.

15.3 Objectives and Policies

Objective 1	To avoid, remedy or mitigate adverse environmental effects arising from the discharge of solid and liquid contaminants onto or into land.
Policy 1.1	To control activities on the basis of the environmental effects arising from the discharge of contaminants to land.
Policy 1.2	To subject all landuse activities which discharge contaminants onto or into land located over the unconfined aquifer/s to greater controls on the basis of environmental effects.
Policy 1.3	To encourage riparian management for landuse activities located adjacent to surface water resources which require enhancement or are highly valued.

Policy 1.4	To undertake targeted monitoring and research to determine the effect of non-point source discharges on surface water quality in water bodies which require enhancement or are highly valued.
Policy 1.5	To require self-monitoring for agricultural and industrial activities which discharge waste to land to determine the environmental effects associated with the discharge on soil and water quality.
Policy 1.6	To develop land based discharge guidelines for key disposal activities and key physical environments within the planning area which avoid, remedy or mitigate adverse effects associated with disposal.
Policy 1.7	To set standards of treatment for on-site human effluent disposal that avoid adverse environmental effects for all properties not connected to the reticulated sewerage system.
Policy 1.8	To require comprehensive monitoring of effects associated with the existing and closed landfills in the planning area and take such action as required to mitigate those effects.

The objective and policies recognise that activities involving the discharge of solid and liquid contaminants to land have varied effects on the environment. Activities with less significant environmental effects can be subject to less restrictive controls. However, activities with more significant effects should be subject to more restrictive controls. The policies also recognise that in certain locations, such as over the unconfined aquifer, activities have the potential to create more significant effects. In these locations activities will be subject to more restrictive controls. This is particularly important over the unconfined Wairau Aquifer which supplies the majority of the catchments domestic, agricultural, commercial and industrial water.

Riparian management is considered an effective way of minimising adverse effects on adjacent surface water bodies. A number of waterbodies in the planning area have been identified as having high value or requiring enhancement. Riparian management should be encouraged on land adjacent to these resources to reduce the effects of sedimentation, stock trampling, cropping, and fertiliser/chemical application which can adversely affect water quality.

Monitoring is important to determine the actual effects associated with non-point source discharges of contaminants on surface water and groundwater. This is poorly understood currently and it is therefore possible that current management methods are less than effective. Monitoring information will be used to develop the most effective and equitable controls.

The development of land based discharge guidelines is important because these can be integrated into rules and therefore provide certainty to users while also ensuring that adverse effects are avoided, remedied or mitigated. The guidelines should be sufficiently comprehensive to cover key discharge activities and key receiving environments. Guidelines can also be used to educate users.

One of the activities which has a significant adverse effect on soil and water quality and amenity values is the on-site treatment of human effluent. The majority of houses in the Blenheim urban area are connected to a reticulated sewerage system. However, rural residential houses and the townships of Renwick, Grovetown, Riverlands, Ashford Grove subdivision, Tuamarina, Rarangi and Burleigh are all unsewered. In some cases the on-site effluent treatment systems, (usually septic tanks), function very poorly, particularly in wet periods when the groundwater table is high. In these locations there

is real potential for contamination of surface water and groundwater, and frequently of the aquifers which supply community or individual household drinking water. Clearly there are both health and environmental risks associated with this situation. The policies requiring higher standards of treatment and research into mitigating the effects of human effluent disposal are incorporated to address these significant problems.

The district's landfills represent significant quantities of contaminants being discharged to land. Rationalisation of the landfills to one fully engineered site will greatly reduce the volume of contaminants (in leachate form) discharged to land. In the engineered landfill, leachate will be reduced through improved stormwater interception and will be controlled through the use of liners. Comprehensive monitoring will be required to ensure that any effects arising from the site are identified. Closed landfills will require remediation and monitoring to ensure that the continued effects of decomposing waste are being avoided, remedied or mitigated.

15.4 Methods of Implementation

Rules	Rules will be used to require discharge to land activities to avoid, remedy or mitigate adverse effects. Activity classifications will be used to distinguish between activities with minor and more significant adverse effects. Activities with minor adverse effects will be permitted. Discharge to land standards will be developed and used as part of the rules. Compliance with these standards will enable most activities to proceed as Permitted or Controlled Activities. Separation distances, application rates, and application areas will be incorporated within the rules to avoid, remedy or mitigate the effects of contaminants being discharged to land.
Education	About the effects of contaminants being discharged to land, particularly the effects of the discharge of hazardous and toxic contaminants and the effects of discharge over the unconfined aquifer. Education programmes will include practical information on how to reduce adverse effects, particularly on water quality and amenity values. One of the priority activities to be addressed in this community education programme will be the effect of discharges from on-site effluent treatment systems. About the benefits of riparian management.
Guidelines	Provide information on appropriate land uses and encourage use of voluntary guidelines and best practices.
Incentives	To provide incentives to landowners to improve riparian management in areas where water quality requires enhancement.
Monitoring	Undertake monitoring to identify the actual effects of non-point source discharges on surface water quality for those water bodies where water quality requires enhancement or water bodies with very high value. Use self-monitoring of discharges requiring consents to educate users about the effects of their activities.

Investigation	To investigate and identify improved methods for treating human effluent in unsewered towns and rural residential areas particularly those sites located over the unconfined aquifer.
Liaison	Liaise with rural land owners and Landcare Groups to encourage improved riparian management adjacent to water bodies with high value or where the existing water quality requires enhancement.
Enforcement	To issue abatement notices and enforcement orders where the discharge of contaminants creates any significant adverse effect that is not permitted through a resource consent.

Rules are required to ensure that significant adverse effects on water, soil quality and amenity values are avoided, remedied or mitigated. However, many landuse activities are difficult to control or enforce by rules and as such require other methods, primarily education, liaison and incentives to achieve a desired attitude change. Monitoring is important as an education tool to provide better information on the effects of non-point source discharges on water quality. Investigation is required to deal with the complex problem of contamination which arises from poorly functioning on-site sewage treatment systems.

Objective 2	To significantly reduce the quantity of contaminants discharged to land.
Policy 2.1	To encourage all organisations and individuals who discharge contaminants to land to adopt principles of waste minimisation and cleaner production by: <ul style="list-style-type: none"> • Reducing the quantity or toxicity of the discharge by using resources more efficiently; and • Reusing, recycling and recovering materials from the waste stream.
Policy 2.2	To promote the composting of organic and plant material.
Policy 2.3	To ensure that any adverse environmental effects associated with composting are avoided by subjecting the activity to appropriate land use and discharge controls.

Growth in the Marlborough economy has led to an increase in the quantity and toxicity of contaminants being discharged to land. One of the most effective ways of reducing the environmental effects associated with such contaminants is to reduce the volume or toxicity of material generated for disposal.

Using Cleaner Production Systems is an effective method of reducing waste either by preventing its generation or reducing its volume or toxicity. The Environmental Management Challenge and other industry and public education programmes are designed to promote cleaner production and achieve a reduction in waste.

Recent waste surveys in Marlborough show that approximately 40-60% of the Marlborough solid waste stream is compostable. Compostable waste includes garden material, fish waste, organic kitchen scraps and untreated sawdust. Controlled composting is an excellent way of reducing the effects associated with the disposal of waste because it creates a valuable resource that can be used for fertiliser or soil enhancer for home gardens, forestry, agriculture, horticulture, and viticulture. The

Council recognises that composting will also extend the life of the central landfill and will reduce soil and water contamination.

15.5 Methods of Implementation

Rules	Subject composting operations to rules to ensure that the effects of contaminants being discharged to the environment are avoided, remedied or mitigated.
Education	Promote waste reduction techniques, including the avoidance of waste through adopting cleaner production and reuse and recycling of materials. Promote waste minimisation to industry through implementation of an Environmental Integrity Programme. Inform the community about the benefits of composting and the methods to be employed to avoid, remedy or mitigate adverse effects of composting.
Incentives	Use economic instruments to provide an incentive for waste minimisation.
Advocacy	The Council will advocate to the Minister for the Environment for the development of national systems to address waste minimisation and full environmental accounting of resources disposed of as waste.
Other	Provide compost bins at Transfer Stations for the separation of green waste prior to disposal and discounted landfill charges for the green waste.

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15.6 Objectives and Policies

Objective 1	The storage and transfer of solid and liquid waste materials in such a way that water and soil quality, land and water ecosystems, and amenity values are not adversely affected.
Policy 1.1	Avoid, remedy or mitigate adverse effects associated with the transfer and storage of waste materials.

The importance of the coastal and land resources for communities' cultural, social and economic wellbeing demands the effects of storage or transfer of solid wastes are avoided so that there is no adverse effect on the potential or life-supporting capacity of those resources.

15.7 Methods of Implementation

Rules	Rules make provision for the storage and transfer of materials, including wastes, subject to performance standards.
Education	Promote methods for the safe transfer of solid and liquid materials, including wastes, that avoid adverse environmental effects. Education would include techniques to adequately secure loads and prevent leakages.
Enforcement	The Council will issue abatement notices and enforcement orders where the storage of solid and liquid wastes creates any significant adverse effect.

Education is the key means of changing people's attitudes and behaviour. If most of the community is attempting to achieve desired outcomes then regulation is only needed to ensure complete community achievement of outcomes.

15.8 Anticipated Environmental Results

Implementation of the policies and methods for managing the discharge of contaminants to land is anticipated to result in:

- Maintenance or enhancement of groundwater quality in controlled aquifers through strict controls on discharge of contaminants;
- Improved surface water quality through riparian management alongside water bodies which require enhancement;
- Adverse environmental effects associated with landfills avoided, remedied or mitigated;
- Soil contamination reduced and land ecosystems protected through improved control of the discharge of contaminants to land, particularly agricultural effluent and industrial waste;
- Soil contamination reduced and land ecosystems protected through control of the storage and transfer of materials, including waste;
- The reuse of valuable resources being encouraged and the waste stream being reduced;
- Amenity values being protected through the control of dumping of solid waste;
- Amenity values being protected through improved control of the storage and transfer of materials, including waste;
- Improved monitoring information and understanding of effects of non-point source discharges on surface water bodies; and

- Improved functioning of on-site treatment of human effluent in unsewered towns and consequent improvement in amenity values, water quality and soil quality and reduction in community health risks.