

## CHAPTER 33: DISCHARGES TO LAND AND FRESH WATER

### 33.0 INTRODUCTION

Discharges of substances that change the physical, chemical or biological condition of land or water result in contamination of the environment. The changes caused by the discharge of contaminants may have adverse effects on ecosystems and their animal, plant or human communities. The District's surface and subsurface freshwater bodies have a wide range of uses and values including public uses and values such as recreation, the harvesting and consumption of fish and aquatic plants, commercial activities, economic and health uses and values, as well as important aesthetic, ecological, cultural and natural values. Land in the District also has a variety of uses and values, both public and private, including recreation, residential, economic and productive activities and ecological cultural and natural values. Contamination may degrade the quality of soil and water for these values and uses. Discharges of water may have adverse effects on instream values and hydrological functioning water bodies.

The Act requires that all discharges of water or contaminants to water, or to land where contaminants from the discharge may ultimately enter water, be authorised either by resource consent or a rule in a plan. Discharges to land are permitted (except on industrial and trade premises) unless a rule in this Plan states otherwise.

There is a wide range of activities that may result in contamination of land and water resources that are carried out regularly or routinely throughout the District.

Discharges of contaminants may be from defined point sources or from diffuse sources that are associated with a range of urban, industrial or rural activities.

#### 33.0.1 Water Quality

Surface water quality in the District is generally high, particularly in the upper catchment areas. Water quality tends to be lower during periods of low flow and flooding and is usually more degraded in the lower reaches of rivers. Groundwater quality is mostly high except in some areas of the Waimea Plains and Motupipi where elevated levels of nitrates are recorded. Localised areas of contamination may occur in association with some discharge activities.

There are relatively few large polluting discharges and a large number of smaller discharges into fresh and coastal waters and onto land in Tasman District. There are also few discharges of water to water with the most significant of these being discharges from dams.

The State of the Environment monitoring indicates a few situations where water quality is being degraded over time and further guidance is required about water quality objectives and priority for action where water quality is degraded.

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The State of the Environment 2010 report has water quality data for several rivers and streams where water quality can be considered to be degraded. High nutrient levels will degrade aquatic habitats and contribute to excessive periphyton growth, while high levels of disease-causing organisms will affect contact recreation and stock-drinking water values.

Many surface water bodies are used for the supply of stock water. They are also used for contact recreation; whether as a recognised swimming area with regional significance or as a place where local children might play.

### **33.0.2 Point Source Contaminant Discharges**

Point source discharges can be readily managed and their effects controlled and monitored through conditions on resource consents or rules in this Plan.

The community needs to be able to dispose of contaminants into the environment and it also needs to be able to carry out a variety of land use activities that may affect the quality of land, air or water resources. However, such discharge or land use activities must be carried out in such a way that avoids, remedies or mitigates any adverse effects. In most situations, land-based disposal of wastes is preferred over discharge to water because contamination risks are likely to be lower. Discharge to land can provide better opportunities for recycling nutrients and improving vegetation growth and soil condition and reducing numbers of harmful micro-organisms. The geological characteristics of karst, however, mean contaminants discharged on or into karst terrain may rapidly enter subsurface streams in karst and degrade subterranean water. This includes sediment movement into open sinkholes, and this may lead to flooding, erosion and sedimentation within karst features. Effects of run-off and percolation to groundwater must also be accounted for to prevent contamination of water.

In some instances improved discharge treatment or land management methods may be needed to meet water quality standards which the community finds acceptable. In the absence of classified waters, which may aim for higher water quality than currently exists, present water quality may be maintained or enhanced where appropriate.

Discharges may be of waste materials, or of contaminants that are derived from wastes (for example, by biochemical decomposition and leaching). The generation and disposal of waste, therefore, has a strong connection with activities and processes that result in contamination.

There is a need to advocate appropriate waste minimisation and treatment processes and cleaner production or treatment technologies.

There is also a need to regulate discharges to avoid, remedy or mitigate adverse effects. Performance standards for these discharge activities can be specified either through resource consents or rules in the Plan.

Water classification is a method of managing the receiving water quality that complements the management of point source and non-point source contamination. Water classification involves identifying the actual and potential uses and values of a water body and the water quality standards required to maintain them. It is a process of requiring both information about the water body (existing condition, uses and values, etc.) and community involvement. Contaminant discharges would then be subject to performance standards either through permitted activity conditions in the Plan or resource consent conditions to maintain these water quality standards.

The Council has classified water bodies in the Motueka/Riwaka plains and the Waimea catchment areas and will be progressively addressing water classification of all of the District's water bodies.

The management of contaminant discharges and the process of water classification requires that the Council has good databases to enable good decision-making. Point source discharges can be regulated and monitored.

### **33.0.3 Non-Point Source Contaminant Discharges**

Diffuse discharges from rural land and urban run-off are a more insidious problem being difficult to control and contributing to lower water quality. Water quality in the coastal marine area will also be affected, and management of both diffuse and point sources must reflect this.

Non-point source contamination results from diffuse movement of contaminants into groundwater and surface water. Contaminants arise from a variety of activities and processes and include bacterial, sediment, chemical and nutrient contaminants.

Contaminants arise from land use activities such as fertiliser and pesticide use, land disturbance, composting or allowing stock to have uncontrolled access to watercourses. Contaminants may enter the environment directly while the activity is being carried out, or diffusely as a result of natural processes such as leaching, run-off or through wind action.

Unlike contaminants from point sources, which enter the environment at well-defined locations in relatively predictable ways, contaminants from non-point sources find their way into water in an uncontrolled and poorly defined manner. Non-point source contamination of surface water is particularly associated with run-off following rain events. Entrained sediments in stormwater and their associated contaminants can have significant adverse effects on water quality. Percolation to groundwater or subsurface flows to surface water are also pathways for non-point source contamination.

There are some discharge activities for which the cause and effect relationship between the activity and the receiving environment is less distinct. For example, septic tanks, some land disturbance activities and the application of fertiliser, have point source discharges, but their individual contribution in some areas and in some circumstances can be difficult to quantify, and the natural processes and pathways that move contaminants from these activities are sometimes difficult to establish. There is, however, sufficient information to link the cumulative impacts of such activities with degradation of water quality.

Activities on land and discharges to surface water will obviously also have significant potential to impact on coastal water quality. Lower river water quality in times of high flow is a significant cause of degraded coastal water quality. River water quality is itself significantly affected by non-point source contamination, and measures to control this source of contamination will have beneficial flow-on effects in managing coastal water quality.

Some land use and discharge activities also result in contamination of groundwater. For example, nitrates from a variety of land uses have caused elevated nitrate levels in parts of the Waimea and Motueka plains aquifers. There is a risk to water quality as a result of nutrient leaching or run-off caused by poor land management practices and as land use intensifies, including through inefficient irrigation or high stocking rates. Managing water quality impacts from land use activities can be complex and is affected by the type of farming system, fertiliser regime including application rate, stock or plant management system and local soil and geological influences. Some on-site disposal systems for domestic wastewater may also be a source of nutrient contamination in unconfined gravel aquifers such as those in the Waimea Plains.

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Micro-organisms from on-site domestic effluent disposal systems in some of the more densely populated areas without sewerage reticulation also enter groundwater. Initiatives taken to limit contamination from these land-based activities will reduce such non-point source contamination of groundwater.

Advocacy for appropriate land management methods and practices that reduce the level of non-point source contamination of the District's water resources is required, including the need to address activities such as land disturbance activities, stock management, use of fertiliser or other chemicals and riparian land management.

There is also a need to better understand the processes and pathways of non-point source contamination in the environment.

#### **33.0.4 Accidental and Emergency Discharges**

Contaminants, especially hazardous substances, can, if accidentally released into the environment, cause significant adverse effects.

Management of contaminant discharge systems and the management of hazardous substances should include an assessment of the risks and hazards associated with an accidental or emergency release of that contaminant.

Such management includes consideration of structures and management systems that will avoid, where possible, or mitigate or remedy the adverse effects of such a discharge.

There is a need to ensure appropriate levels of planning for accidental or emergency discharges are implemented, particularly where there are hazardous substances.

### **33.0.5 Stormwater Discharges**

The diversion and discharge of stormwater is an unavoidable consequence of urban and rural development. The effects of these discharges must be considered and it must be recognised that stormwater contains a variety of contaminants such as sediments, oil, heavy metals and nutrients that accumulate on hard surfaces. When it rains these contaminants are carried into streams and, ultimately, the sea. In most cases it is difficult and costly to treat stormwater. There are, however, a number of solutions that can reduce the amount of contaminants within stormwater. Council has little local information about the degree of contamination of stormwater or effects of stormwater discharges, but there is sufficient evidence from other New Zealand cities that cumulative adverse effects are being caused by urban stormwater in the Coastal Marine Area.

Council also holds inadequate information about the capacity and condition of existing urban stormwater systems. There is increasing concern that some stormwater systems are at or near full capacity. Continued incremental urban development is adding to the risk of system failure or increased unmanaged flooding in some areas.

### **33.0.6 On-Site Wastewater Disposal**

Many small communities and individual properties depend on on-site disposal of domestic wastewater.

A variety of adverse effects from on-site wastewater disposal systems in the District arise through inappropriate design, poor installation practices, inadequate system maintenance and increasing density of septic tank/disposal field systems. The direct or indirect discharge of human effluent to surface or ground water has adverse effects on a number of values and uses of water and also constitutes a significant health hazard. Public health risks caused by elevated pathogen levels in ground and surface water and by effluent reaching the ground surface occur in some parts of the District. Nuisance effects (noxious odours) are frequent causes of complaints. Domestic wastewaters are also implicated in contributing to elevated nutrient levels in some of the District's ground and surface waters.

There is a need to control the use of on-site disposal systems for domestic waste water to avoid, remedy or mitigate adverse effects, particularly in those parts of the District where there are limitations to their use. Where such systems are in use, there is also a need to ensure that householders have sufficient information to carry out on-site disposal of domestic effluent sustainably.

### **33.0.7 Contaminated Sites**

There are contaminated sites in the District and many of these are sites that have had an historical association with hazardous substances that has resulted in site contamination. Types of sites of particular concern in the District include industrial sites where pesticides were manufactured; timber treatment plants, landfill sites, and underground petroleum storage tanks.

Contaminated sites may continue to discharge contaminants into land, air or water, and they may have adverse effects on human health and the environment by contaminating soil or water or by contaminants being taken up by plants or animals. Contaminants can continue to be spread through the environment by leaching, surface run-off, wind action and through crops or animals growing on the contaminated soil. Without good information, the Council cannot manage these risks effectively. The Council will gather information about contaminated sites and options for management or remediation, and will ensure that landowners are advised about the contamination status of their land. Liability for contamination may not always be clear and the Council will adopt a case-by-case approach for assessing responsibility and options for remediation. The creation of new contaminated sites will be avoided through policies and rules controlling the use, storage and disposal of hazardous substances.

In addition to the provisions of this Plan, the Resource Management (National Environmental Standard on Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 may apply to specific activities involving contaminated sites. The National Environmental Standard provides standards relevant to managing the use, development and subdivision of contaminated or potentially contaminated land for the protection of human health.

### **33.0.8 Activities in the Beds of Rivers and Lakes**

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Policies 33.1.3.14 and 33.1.3.15 are in support of the policies in Part IV seeking to avoid, remedy or mitigate adverse effects of stock and vehicle access to waterways and other disturbances of the bed.

They also help establish a priority for action to improve water quality that may have degraded water quality for the identified uses and values.

## **33.1 CONTAMINANT DISCHARGES**

### **33.1.1 Issues**

**33.1.1.1** Discharges of contaminants, including diffuse discharges from some land use activities:

- (a) can cause significant adverse effects either on their own or cumulatively;
- (b) degrade the suitability of some of the District's water bodies for some of their natural and human values;
- (c) cause elevated nutrient, pathogen, chemical or sediment levels in some of the District's water bodies, particularly nitrate levels in some of the Waimea plains, Motupipi and Motueka aquifers.

**33.1.1.2** While the community expects that some discharges of contaminants will be provided for, there is also an expectation that adverse effects of contaminant discharges to land and water are avoided, remedied or mitigated.

### **33.1.2 Objectives**

**33.1.2.1** The discharge of contaminants in such a way that avoids, remedies or mitigates adverse effects while:

- (a) maintaining existing water quality; and
- (b) enhancing water quality where existing quality is degraded for natural and human uses or values.

**33.1.2.2** The management of land and water use in the Waimea Water Management Zones to maintain, and where it is degraded to improve, water quality to meet the management objectives specified in Schedule 30B.

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### **33.1.3 Policies**

*Refer to Policy sets 27.1, 27.4, 27.7, 30.1, 33.1, 33.4, 33.5.  
Refer to Rule sections 28.3, 36.1 - 36.8.*

**33.1.3.1** To recognise and provide for the uses and values of water through a system of classification that establishes the water quality standards required to protect the water quality needs of those uses and values.

- 33.1.3.2** To avoid, remedy or mitigate the adverse effects of discharges of contaminants so that both individually and cumulatively with the effects of other contaminant discharges, they enable the relevant water quality classification standards to be complied with.
- 33.1.3.3** To seek to improve water quality where existing water quality is lower than the requirements of any water classification or water conservation order.
- 33.1.3.4** To ensure that water quality is not degraded where the existing water quality is the same or higher than the relevant water classification or any water conservation order.
- 33.1.3.5** To ensure that existing water quality is not degraded after reasonable mixing as a result of any discharge of contaminants into water and to take into account the following criteria when determining what constitutes reasonable mixing:
- (a) The depth, width and flow characteristics of the receiving water body, including the nature and extent of mixing which may occur and the assimilative capacity of the water.
  - (b) The extent of the mixing zone and the likely adverse effects on aquatic life or ecosystems within the mixing zone.
  - (c) The characteristics of the discharge, including the presence of toxic constituents.
  - (d) The community (public) uses and values of the water or any mixing zone, including those specified in the Plan, any water conservation order or water classification for any water body.
- 33.1.3.6** To take into account the following factors in determining the significance of actual or likely adverse effects on the receiving water of or from contaminant discharges:
- (a) Any water classification given in any schedule to Chapter 36 or water conservation order.
  - (b) Existing water quality of the receiving water.
  - (c) The significance or sensitivity of the aquatic life or ecosystem.
  - (d) The extent of the water body adversely affected.
  - (e) The magnitude, time of year, frequency and duration of the adverse effect, including any cumulative effects as a result of the discharge.
  - (f) The range and intensity of uses and values of the water body.
  - (g) The conflicts between uses and values of the water body.
  - (h) The nature of the risks of the adverse effect.
  - (i) Any relevant national or international water quality guidelines or standards, or water conservation order.
- 33.1.3.7** To ensure the loss of nutrients and sediment to water is minimised through: C48 4/13  
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- (a) working with industry and landowners to develop good industry practices that maximise nutrient use efficiency and minimise nutrient run-off and leaching;
  - (b) requiring through conditions on consent or plan rules that activities that discharge nutrients, or take and use water for irrigation, or are land disturbances, are carried out with good industry practice.
- 33.1.3.8** To reduce the risks of existing land use and land use intensification in the Waimea Plains having adverse effects on water quality, especially the effects of nitrate leaching and losses on groundwater quality for drinking, and on the aquatic ecosystems in Neimann, Pearl and O'Connor creeks by: C48 4/13  
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- (a) developing water quality limits in accordance with Policy 33.1.3.10 to meet the objectives in Schedule 30B for water quality while recognising that existing water quality does not enable the achievement of some of those management objectives.

- (b) developing Irrigation and Nutrient Management Plans to be specified in Schedule 31E with appropriate leaching limits as necessary and adoption of good industry practice where this is available in consultation with industry groups and landowners;
- (c) recognising that further land use intensification will not increase until the Lee Valley Community Dam is in operation and therefore:
- (i) recognising that further details about nutrient leaching limits and industry good practice are in development and will be added to the Plan through a subsequent Plan change;
  - (ii) carrying out further investigation to provide more clarity about historic land use effects and the likely impact of nutrient losses on the coastal springs and groundwater under existing land use and land use intensification;
  - (iii) carrying out further investigation to determine the necessary water quality limits, and measures required to meet them;
  - (iv) working with the primary industry sector to:
    - develop acceptable management practices including, as necessary, nitrogen leaching rates for land use activities in the Waimea plains and to review the Plan to include them as discharge or land use conditions via a Plan change prior to 1 November 2020
    - develop industry good practice that mitigates nitrogen leaching for different land uses, land management regimes and soil types
    - provide support to farmers to prepare on-farm Irrigation and Nutrient Management Plans;
- (d) amending the Plan prior to 1 November 2020 to develop Schedule 31E and Schedule 31F as necessary and to include water quality limits and nutrient limits or allowances that reflect the outcomes of (a), (b) and (c).

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**33.1.3.9** In setting water quality limits and adopting management methods under policy 33.1.3.8, to consider economic, social and cultural implications of those limits or other methods, including any implications for the ongoing production of food on the high productive value land of the Waimea Plains and for the ongoing achievement of objectives 7.1.2.1 to 17.1.2.3.

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**33.1.3.10** In establishing water quality limits to safeguard the critical values and achieve the management objectives set out in Schedule 30B, to consider for future inclusion in the Plan in accordance with Policy 33.1.3.8(d) the following parameters (together with any additional parameters agreed between the Waimea Plains Freshwater and Land Advisory Group and Tasman District Council):

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- (a) Ammonia
- (b) Cyanobacteria (Phormidium)
- (c) Deposited sediment
- (d) Dissolved inorganic nitrogen
- (e) Dissolved oxygen
- (f) Dissolved reactive phosphorus
- (g) Macro-invertebrates
- (h) Macrophyte coverage
- (i) Microbial levels
- (j) Nitrogen toxicity
- (k) Periphyton coverage and biomass
- (l) pH
- (m) Suspended sediment

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| (n) | Temperature                     | C48 4/13 |
| (o) | Nitrate-nitrogen and phosphorus | Op 9/15  |
- 33.1.3.11** To avoid, remedy or mitigate the adverse effects of non-point source contamination arising from land use and discharge activities by a mixture of methods, including regulation of discharge activities, particularly through advocacy of best management practices, and to review the mixture of methods used if environmental monitoring shows that water quality standards are not being maintained.
- 33.1.3.12** To seek to improve water quality by appropriate riparian and coastal land management.
- 33.1.3.13** To promote and encourage discharge of wastes to land or constructed wetlands in preference to discharge to water where:
- (a) discharge to land or constructed wetlands has less actual or potential adverse environmental effects than discharge to water;
  - (b) land disposal system design and operation is such that adverse effects on the environment, including soil and surface and groundwater quality are avoided, remedied or mitigated; and
  - (c) the discharge to land is the best practicable option.
- 33.1.3.14** To improve water quality where disease-causing organisms, dissolved oxygen, fine sediment or nutrient levels degrade water quality:
- (a) below water quality standards specified in a water conservation order;
  - (b) below microbiological standards for stock-drinking water;
  - (c) below the action level microbiological standard for contact recreation in rivers and lakes having value for contact recreation;
  - (d) causing nuisance algal growth.
- 33.1.3.15** To help guide decisions for priority where action (including enforcement action or other action by Council) is needed under Policy 33.1.3.14, the Council will take into account:
- (a) the relative significance of instream values of a water body to the community, particularly in relation to the uses and values given in Schedule 30A, and opportunities for contact recreation;
  - (b) the extent and severity of the adverse effects of contaminant discharges on a water body, especially if it is likely to lead to long-term changes to the water quality, bed substrate or aquatic ecosystems of the water body;
  - (c) the extent to which amenity values, stock water supplies, edible fish, shellfish or aquatic plants and other mahinga kai, and indigenous species are being adversely affected by contaminant discharges;
  - (d) the extent to which the Clean Streams Accord target date of 2012 is relevant and appropriate;
  - (e) the risks for water quality arising from intensive farm management systems.
- 33.1.3.16** 1. When considering any application for a discharge, the consent authority must have regard to the following matters:
- (a) the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and
  - (b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.



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| 2. | When considering any application for a discharge, the consent authority must have regards to the following matters:   | NPS<br>FWM<br>2/8/14 |
|    | (a) the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their contact with fresh water; and   |                      |
|    | (b) the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their contact with fresh water resulting from the discharge would be avoided.          |                      |
| 3. | This policy applies to the following discharges (including a diffuse discharge by any person or animal):  | NPS<br>FWM<br>1/7/11 |
|    | (a) a new discharge; or   |                      |
|    | (b) a change or increase in any discharge –   |                      |
|    | of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water. |                      |
| 4. | Paragraph 1 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2011 took effect on 1 July 2011.   | NPS<br>FWM<br>2/8/14 |
| 5. | Paragraph 2 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2014 takes effect.   |                      |

### **33.1.20 Methods of Implementation**

#### **33.1.20.1 Regulatory**

- (a) Rules relating to:
  - (i) the discharge of contaminants directly or indirectly into water;
  - (ii) land use activities and the discharge of contaminants onto land;
  - (iii) the location of discharge activities.
- (b) Enforcement or abatement action as necessary.
- (c) Classification of the District's water bodies, through consultation with affected parties, that:
  - (i) identifies uses and values that are being or likely to be adversely affected by degraded water quality;
  - (ii) identifies priorities for classification according to the risks to uses and values of the water that are, or may be, adversely affected by the existing water quality;
  - (iii) classifies the water bodies to protect the uses and values that may be adversely affected by degraded water quality.

#### **33.1.20.2 Education and Advocacy**

- (a) Liaison with resource user groups and interest groups and other statutory bodies.
- (b) Provision of information and advice concerning sustainable practices, including best practicable options for contaminant discharges and riparian and coastal land management to improve or maintain water quality.

- (c) Promotion or support of industry codes of practice, such as the code of practice for fertiliser use, and individual management practices that avoid, remedy or mitigate adverse effects of contaminant discharges or land uses on all receiving environments. *(Refer to Method 12.1.20.3(b))*
- (d) Promotion of appropriate waste management practices, including cleaner production initiatives.
- (e) To work closely with landowners and with industry representatives, as appropriate, to improve water quality degraded by stock access and crossings, particularly where this is caused by intensive stocking systems, especially through the Regional Action Plan to implement the Clean Streams Accord in Tasman District. C27 2/10  
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- (f) To work with or support landowners, industry groups, iwi, other statutory bodies such as the Fish and Game Council, the Department of Conservation, community groups, and agencies such as Landcare Trust to improve water quality that is degraded as a result of the cumulative impacts of adjacent land uses, especially where they include intensive stocking systems, including by supporting applications for funding the preparation of farm management plans from schemes such as the Sustainable Farming Fund.
- (g) To consult with iwi and the community in conjunction with the Long Term Plan planning process in identifying priority rivers for addressing water quality degradation with education, advocacy, monitoring and compliance action by Council.
- (h) To develop techniques and procedures to assist farmers in predicting the extent to which their stock management activities adversely impact on water quality.

### 33.1.20.3 Works and Services

- (a) Provision of a 24-hour environmental complaints service.
- (b) Provision of waste collection and storage services.

### 33.1.20.4 Financial Incentives

- (a) Council funding to support riparian land management works agreed to between the Council and the landowner, in accordance with the following criteria:
  - (i) the works provide or assist in providing improved downstream water quality;
  - (ii) the works are carried out only on properties where adverse water quality effects arising from land use practices on adjacent land are identified and, where necessary, are avoided, remedied or mitigated by the property owner or manager;
  - (iii) the property manager or owner carries out any maintenance, pest control or repair works.

### 33.1.20.5 Investigations and Monitoring

- (a) Investigation of the relationships between land use activities and environmental processes to better understand causes and effects of non-point source contamination of surface and groundwater, including nitrate levels in the confined aquifers of the Waimea Plains and sediment levels in karst aquifers.
- (b) Maintenance of base-line monitoring of surface and groundwater quality.
- (c) Monitoring the effects of discharges and land use activities on existing water quality and on the standards of any water classification.
- (d) Research and investigation that improves the knowledge of the effects of different stock management systems on river and lake beds. C27 2/10  
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- (e) Further investigation for the water resources of the Waimea plains to develop:
- (i) numeric objectives to achieve the narrative water quality objectives in Schedule 30B;
  - (ii) appropriate surface water and groundwater quality limits required to meet the numeric objectives;
  - (iii) good and best industry practices that will assist with achieving the narrative and numeric water quality objectives;
  - (iv) other appropriate measures that will enable the narrative and numeric water quality objectives to be met.

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### 33.1.30 Principal Reasons and Explanation

The suitability of a water body to support particular uses and values must be maintained. These uses and values must be identified for the District's water bodies so that clear management objectives can be defined. Contaminant discharges can then be managed according to the limitations of any water quality standards.

Existing water quality in some water bodies may be higher than required for the purposes given in any water classification. The Council will ensure that the existing water quality is unchanged as a result of any activity, including water abstractions, contaminant discharges and land disturbance activities. Water classification for identified uses and values may also require that water quality is improved to allow for those uses and values.

Riparian zones provide a buffer between land use activities and surface water quality. There are some land uses that may have an adverse effect on water quality. The policies recognise that management of riparian zones and appropriate changes to land management practices can be a very effective means of reducing the impacts of catchment development on watercourses.

Nitrate levels in the confined aquifers of the Waimea Plains at times exceed the drinking water standards. Some of the District's aquifers are vulnerable to contamination from some land uses, particularly contaminant discharges in recharge areas or in karst terrain. Land use management to avoid nutrient losses to groundwater is critical in sensitive areas such as the Waimea Plains Aquifer Protection Area.

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There is a risk to the quality of groundwater through poor land management practices and inefficient irrigation, resulting in nutrient leaching, and to surface waters through runoff and groundwater contributions in the Waimea Plains. Council intends to address these issues through requiring irrigation and nutrient management planning based on industry good practice. The risks to water quality with increased land use intensity may be aggravated following the possible construction of the Lee Valley Community Dam.

There are some gaps in knowledge of existing farm practices and the extent to which they relate to 'good practice'. In addition, not all farming systems have had industry good practice performance standards developed for them.

Some modelling has been carried out at a catchment scale for the Waimea Plains which indicates increased nitrate losses to groundwater. In the meantime, despite elevated nitrate concentrations in some groundwater, water quality monitoring indicates a trend towards improving groundwater quality in most of the Plains groundwater.

Increased land use intensity will not occur until after the dam is operating and the lag time as nitrate travels through the system may delay appearance of effects.

So, while existing nitrate issues have been identified, current indications are that nitrate levels are generally reducing and that they can be further improved through application of good industry practice, as well as careful management of point source discharges and stock management. Further, the Council intends the management of nutrient losses as a result of land use intensification through the preparation irrigation and nutrient management plans which are specified in Part V of the Plan.

The Council will maintain a close watch on how industry and other regional council initiatives progress and will further develop its nutrient management to give effect to the requirements of the National Policy Statement for Freshwater Management 2011 for water quality objectives and limits as appropriate.

A further consideration is the likely need by landowners for competent advice about nutrient and water management. New Zealand is in a capacity building phase at this time so the requirement for nutrient budgets needs to be appropriately targeted and timed. Further investigation by the Council and primary production industries and support services into how information needs can be met is required.

In most situations, land-based disposal of wastes is a preferred option over the discharge of wastes to water. Water contamination risks can be significantly less with land disposal systems and land-based systems can provide better opportunities for nutrient recycling and soil improvement. However, land disposal systems must also account for any actual or potential adverse effects on the environment and there may be sites or situations where land disposal is not desirable.

These policies provide a framework to implement the Council's objective of maintaining existing water quality and enhancing it where appropriate. They take into account existing water quality and provide opportunities for enhancing water quality where there may be significant adverse effects on receiving water arising from discharge or land use activities. The policies apply to applications for new discharges and renewal applications for existing discharges. Existing dischargers may be required to improve quality of a discharge to meet a water classification standard when discharge permit conditions are reviewed or permits are renewed, or when rules in the Plan require higher performance standards for permitted activities. Council will also address the need for advocating and promoting sustainable land use practices as well as ensuring the establishment and maintenance of suitable resource monitoring databases. The Council recognises the value of appropriate industry codes of practice in achieving sustainable land use in relation to contaminant management and in complementing the regulatory regime for discharges.

Managing stock access to rivers falls both under the scope of activities under Section 13 of the Act relating to disturbance of the beds of rivers, as well as discharge activities under Section 15 affecting water quality and aquatic habitat.

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The Plan already contains a water quality objective aimed at maintaining or enhancing water quality. For rivers and streams that currently have degraded water quality, new policy addresses when or how degraded water quality should be enhanced and the quality standards that must be maintained in all rivers.

Most of the degradation is due to non-point sources, including run-off from farm land and stock access in some areas. There is also degradation of water quality in urban areas, mostly because of the effects of urban stormwater run-off.

The Council currently manages most direct discharges to water through discharge permit conditions and monitoring.

The policy direction in relation to already degraded water bodies means that goals for improving water quality are more certain, and deciding on priorities becomes a clearer and more open process. Council's State of the Environment Monitoring will identify where there are concerns with water quality, and local communities will be involved in identifying priorities for action.

The management of freshwater quality is also an issue being addressed nationally, including through the development of a National Policy Statement on management of freshwater. The Council's policies provide a means to address water quality issues in a proactive way.

A stock water quality standard for bacterial contamination is a lower hurdle than a contact recreation water standard. However, both standards will require funding and effort by Council and landowners to improve water quality in some areas.

Costs to landowners include fencing and bridging costs, alternative stock water supply options, weed and pest control in some areas, and changes to farm practices. However, there are a range of benefits for landowners, including better stock health (better water quality, as well as reduced foot injury), faster travel times to and from milking platforms, fewer losses from stock falling into watercourses and less cost relating to managing river bank erosion.

Costs to Council include staff time and effort, education and advocacy programmes, and compliance effort. Additional costs will be associated with any incentive or subsidy schemes that may be adopted. These policies give some assurance to communities that the Council is managing water quality issues arising from non-point sources, especially in relation to Part IV activities.

A policy that states the desired water quality standards will give some certainty to communities and stakeholders. The water conservation orders for Motueka and Buller provide some management direction in relation to point source discharges, but Council is also obliged to ensure the cumulative effects of other activities are also addressed.

There is a strong community feeling that water should be left in a state fit for future generations to enjoy, including in relation to opportunities for children to play in water.

While water in small farm drainage ditches is unlikely to be used for contact recreation, nearly all drainage water flows into larger watercourses and can contribute to poor water nutrient and biological water quality in downstream receiving waters, especially because of cumulative effects. However, elevated levels of contaminants at the farm level may not always have adverse effects in downstream rivers because of the effects of dilution.

The level at which the policy is implemented will be dependent on local conditions, local water quality and uses of the affected water bodies. Council will continue to work with community groups to find effective solutions for improving water quality where necessary.

#### **33.1.40 Performance Monitoring Indicators**

- (a) The surveyed quality of water in water bodies affected by contaminant discharges and changes in the quality over time.
- (b) The numbers of resource consents issued for discharges of contaminants to water.
- (c) The level of compliance with conditions of resource consents.

## **33.2 ACCIDENTAL OR EMERGENCY DISCHARGES**

### **33.2.1 Issue**

Emergency or accidental discharges of contaminants, especially hazardous substances, have the potential to cause significant adverse effects on the environment.

### **33.2.3 Objective**

The avoidance, remediation or mitigation of the adverse effects resulting from emergency discharges or accidental spills.

### **33.2.3 Policies**

*Refer to Policy sets 5.5.3, 30.1.3.*

*Refer to Rule sections 16.17.2, 36.1 – 36.3, 36.5 – 36.8.*

**33.2.3.1** To promote and advocate development of site contingency plans to avoid, remedy or mitigate the likely adverse effects of any emergency discharges or other accidental spills.

**33.2.3.2** To ensure that land use and discharge activities are carried out, having regard to contingency planning measures appropriate to the nature and scale of any discharge and risk to the environment for any accidental discharge of any contaminant that may result in connection with the activity.

### **33.2.20 Methods of Implementation**

#### **33.2.20.1 Regulatory**

- (a) Rules relating to site management systems and the preparation of contingency plans.

#### **33.2.20.2 Education and Advocacy**

- (a) Promotion of contingency planning to avoid, remedy or mitigate adverse effects of emergency or accidental discharges.

### **33.2.30 Principal Reasons and Explanation**

The adverse effects of an emergency or accidental discharge can be avoided, remedied or mitigated more successfully if there is an appropriate strategy in place which considers the possibility of such events and ensures the correct management or structural responses are implemented. Types of contingency plans are dependent on the nature and scale of the discharge, the level of risk to the environment and level of risk of emergency or accidental discharge.

## **33.3 STORMWATER DISCHARGES**

### **33.3.1 Issues**

- 33.3.1.1** Urban stormwater networks in some areas of the District are at or near full capacity, or in some cases exceeded.
- 33.3.1.2** Contaminants in urban and rural run-off can have significant adverse effects on receiving environments, particularly cumulative adverse effects from urban run-off.
- 33.3.1.3** There is a significant inadequacy in the information held by Council about:
- (a) the capacity, condition and, in some places, location of existing urban stormwater networks;
  - (b) the local degree of contamination of stormwater and the effects of stormwater discharges in the District's receiving environments.

### **33.3.2 Objective**

Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion and water contamination.

### **33.3.3 Policies**

*Refer to Policy sets 5.1.3, 6.3.3, 30.1.3.*

*Refer to Rule sections 16.3, 16.7, 36.4.*

- 33.3.3.1** To require all owners, particularly the Council as stormwater asset manager, of all or part of any stormwater network to avoid, remedy or mitigate adverse effects of stormwater discharges.
- 33.3.3.2** To advocate works to restore and protect stream or coastal habitats and improve and protect water quality affected by stormwater and drainage water discharges.
- 33.3.3.3** To manage the adverse effects of stormwater flow, including primary and secondary flowpaths, and the potential for flooding and inundation.
- 33.3.3.4** To avoid, remedy or mitigate the potential for flooding, erosion and sedimentation arising from stormwater run-off.
- 33.3.3.5** To avoid, remedy or mitigate the adverse effects of stormwater on water quality and the potential for contamination.
- 33.3.3.6** To maintain or enhance stormwater infiltration to enhance groundwater recharge.
- 33.3.3.7** To require owners of all or part of any stormwater drainage network to avoid, remedy or mitigate any adverse effects of stormwater discharges.
- 33.3.3.8** To encourage an integrated whole-catchment approach to the management and discharge of stormwater.
- 33.3.3.9** To require the use of low impact design in the management of stormwater discharges in any new development, where practicable.
- 33.3.3.10** To encourage the restoration and rehabilitation of stormwater drainage networks where natural drainage networks have been significantly modified.

- 33.3.3.11** To take into account the long-term management of stormwater drainage in consideration of land development, including subdivision and land-use changes.

### **33.3.20 Methods of Implementation**

#### **33.3.20.1 Regulatory**

- (a) Rules relating to:
- (i) the discharge of stormwater;
  - (ii) stormwater planning for development, including urban and residential development.

#### **33.3.20.2 Education and Advocacy**

- (a) Advocacy for works to restore and protect stream or coastal habitats.
- (b) Education and advocacy of methods to improve stormwater quality.
- (c) Promotion or support of industry codes of practice and individual management practices that avoid, remedy or mitigate adverse effects of stormwater discharges on all receiving environments. (*Refer to methods 12.1.20.3(b) and 33.1.20.2(c)*)

#### **33.3.20.3 Works and Services**

- (a) Provision of stormwater infrastructure to defined levels of service and performance.

#### **33.3.20.4 Investigations and Monitoring**

- (a) Investigation into and monitoring of the levels of contaminants in river, wetland and estuary sediments and sediment levels in caves formed in karst affected by stormwater discharges.
- (b) Inspections of industrial sites in Richmond, Motueka and elsewhere to assess potential for contaminants to enter stormwater.
- (c) Investigation into the range of methods available for stormwater treatment.
- (d) Investigation into the natural drainage characteristics of catchments for the purpose of determining and designing appropriate whole-catchment stormwater management.

### **33.3.30 Principal Reasons and Explanation**

Stormwater can contain a range of contaminants that will have adverse effects on receiving water environments, including cumulative adverse effects on the Coastal Marine Area. Stormwater can also have adverse effects on the hydrological functioning of waterways, particularly through flooding and erosion effects. There is therefore a need for Council to control stormwater discharges.

A greater level of community awareness about stormwater quality and methods of improving water quality by site management and discharge practices will promote more sustainable resource use.

There are many urban streams that have been substantially modified by their function in urban stormwater drainage networks in Richmond, Motueka and other urban centres. Some of these could benefit from a range of restoration or protection activities to improve or protect aesthetic or natural values.

Managing stormwater discharges can be a complex issue, and this affects environmental resource management as well as infrastructure services functions and responsibilities of Council. Water flow management, water quality, habitat protection and environmental sustainability are all important stormwater management objectives which must be achieved when addressing the effects of activities on stormwater drainage.



Where possible, a low impact stormwater design approach to management is considered to be the best approach to managing stormwater run-off. This approach minimises modification to the natural environment, or makes use of management approaches that mimic natural drainage networks. The retention of vegetation, natural drainage contours and existing waterways (including riparian buffer strips) within catchments will reduce the rate of stormwater run-off, increase infiltration and groundwater recharge, encourage healthy aquatic ecosystems and improve water quality.

In many cases, a combination of Low Impact Design and ‘conventional’ management solutions will be needed to ensure that the effects of stormwater run-off are no more than minor.

#### **33.3.40 Performance Monitoring Indicators**

- 33.3.40.1** Stormwater drainage networks that retain natural stream habitats while providing efficient drainage of stormwater.
- 33.3.40.2** Surveyed condition of receiving water environments.
- 33.3.40.3** Levels of contaminants in sediments.

## 33.4 ON-SITE DISPOSAL OF DOMESTIC WASTEWATER

### 33.4.1 Issue

Inappropriate design, poor installation practices, inadequate system maintenance and increasing density of on-site domestic wastewater disposal systems cause a variety of adverse effects in parts of the District.

### 33.4.2 Objective

On-site disposal of domestic wastewater, which avoids, remedies or mitigates adverse effects on groundwater or surface water quality, habitats, human health and amenity values.

### 33.4.3 Policies

*Refer to Policy sets 5.1.3, 33.1, 35.1.*

*Refer to Rule sections 16.3, 17.1, 17.5, 17.6, 17.7, 17.8, 36.1, 36.2.*

- 33.4.3.1** To ensure householders are aware of the potential adverse effects that may be created by discharges from on-site wastewater disposal systems, and of methods of avoiding, remedying or mitigating them.
- 33.4.3.2** To ensure that the adverse effects, particularly the cumulative adverse effects, of on-site disposal of domestic wastewater on water quality and aquatic habitats, including coastal water, and on human health or amenity in the Wastewater Management Area are avoided, remedied or mitigated by:
- (a) controlling the use of on-site systems in areas where there are significant limitations to sustainable on-site disposal of domestic wastewater including:
    - (i) low or very low permeability clay soils;
    - (ii) rapidly draining coastal soils;
    - (iii) areas of high groundwater tables;
    - (iv) steeply sloping sites, especially on south-facing slopes;
    - (v) unstable terrain;
    - (vi) proximity to surface water bodies;
    - (vii) high density of existing and new on-site systems and the cumulative impact of such discharges in terrain that has significant limitations to on-site disposal;
  - (b) requiring comprehensive site and soil assessments to identify any site limitations;
  - (c) requiring a high level of performance for design, construction, installation, operation and maintenance for new on-site disposal systems;
  - (d) ensuring adequate buffers between disposal fields, water bodies, and the coast, especially Waimea and Mapua Inlets;
  - (e) reducing the risk to human health arising from pathogens in the wastewater entering into water;
  - (f) ensuring the net nitrogen losses from land in the Wastewater Management Area to be subdivided do not result in adverse effects on aquatic habitats as a result of discharges of domestic wastewater;
  - (g) ensuring stormwater management accounts for potential effects on on-site disposal fields;

- (h) ensuring that the potential adverse effects, especially cumulative effects of further residential development, are taken into account in considering any application to subdivide land in the Wastewater Management Area.

**33.4.3.3** To require regular programmed maintenance of on-site wastewater treatment and disposal systems to minimise risk of system failure and reduce risk of adverse environmental effects.

**33.4.3.4** To encourage consideration of wastewater treatment systems that service a cluster of households (subject to any site limitations) to:

- (a) take advantage of opportunities for high technology advanced wastewater treatment solutions at cluster scales;
- (b) reduce risks of system failure and cumulative adverse effects of single on-site systems;
- (c) enable Council to develop effective and cost-efficient systems for monitoring on-site wastewater systems.

**33.4.3.5** To ensure that legal, practical, financial and enforceable responsibility is established for the operation and maintenance of any on-site wastewater treatment and disposal system, especially where such systems service a cluster of dwellings, taking into account both day-to-day operation and maintenance of such systems as well as provision for depreciation and replacement of equipment and of systems.

**33.4.3.6** To avoid, remedy or mitigate the adverse effects of discharges of domestic wastewater, including cumulative effects, particularly those in the Special Domestic Wastewater Disposal Areas.

## **33.4.20 Methods of Implementation**

### **33.4.20.1 Regulatory**

- (a) Rules relating to the discharge of wastewater from on-site domestic wastewater disposal systems.
- (b) Identification on planning maps of Special Domestic Wastewater Disposal Areas and Wastewater Management Areas where there will be specific regulatory requirements for discharge from on-site treatment and disposal systems for domestic wastewater.

### **33.4.20.2 Education and Advocacy**

- (a) Promotion of public awareness about the maintenance of on-site domestic wastewater treatment systems in order to reduce contamination risks to all receiving environments, including karst water bodies.
- (b) Promoting and facilitating the uptake of methods to avoid, remedy or mitigate adverse effects of on-site disposal of domestic wastewater for the local domestic wastewater disposal industry, including the use of cluster systems within the Wastewater Management Area.
- (c) Advice and information to householders relating to the design, installation and management of on-site disposal systems for domestic wastewater.

### **33.4.20.3 Provision of Services**

- (a) Regular workshops for the local domestic wastewater industry to ensure there are high levels of awareness about design and installation requirements for on-site disposal systems.
- (b) Provision of sewerage reticulation.

**33.4.20.4 Investigations and Monitoring**

- (a) Monitoring on-site domestic wastewater systems, particularly in the Special Domestic Wastewater Disposal Areas and Wastewater Management Areas, to ensure systems are being adequately maintained and meeting required performance standards.
- (b) Monitoring of ground and surface water quality.
- (c) Investigation of the effects of the discharge of domestic wastewater on water quality, particularly in the 'at risk' areas, including karst terrain.

**33.4.30 Principal Reasons and Explanation**

The Council wishes to provide for sustainable on-site domestic wastewater treatment. It wishes to take into account site-specific limitations that may affect the type of on-site disposal system that is installed. There are some areas of the District where existing problems or the presence of particular site characteristics limit the extent of on-site treatment systems possible, and some control over further on-site disposal is necessary. This includes the Rural 3 Zone, which is expected to experience considerable residential growth over the two decades to 2024.

Lack of maintenance is a major reason for system failure and environmental contamination. Householders need to be aware of the maintenance requirements for such systems. As well as carrying out appropriate education and advocacy programmes, the Council also needs to monitor system management to ensure that risks of contamination are minimised.

**33.4.40 Performance Monitoring Indicators**

- 33.4.40.1** Surveyed water quality.
- 33.4.40.2** Incidence of cross-boundary conflicts in relation to domestic wastewater.
- 33.4.40.3** Incidence of public health risk events.
- 33.4.40.4** Level of compliance with performance standards.

## 33.5 CONTAMINATED SITE MANAGEMENT

### 33.5.1 Issue

Contaminated sites may continue to discharge contaminants into the environment and they may:

- (a) contaminate soils;
- (b) pollute surface and ground water;
- (c) discharge contaminants to air;
- (d) result in the uptake and bioaccumulation of contaminants by plants and animals;
- (e) have adverse effects on the environment and human health.

There is limited information on the number and location of contaminated sites and the nature of risk they pose to human or natural values.

### 33.5.2 Objective

To avoid, remedy or mitigate the adverse effects of contaminated sites on human health and the environment.

### 33.5.3 Policies

*Refer to Policy sets 5.5, 33.1, 33.2.*

*Refer to Rule sections 16.7, 18.10, 36.1 – 36.8.*

**33.5.3.1** To avoid, remedy or mitigate the adverse effects of contaminated sites by investigating or encouraging landowners to investigate sites on the site contamination register, particularly where:

- (a) there is a risk of a high level of contamination; or
- (b) there is a high level of risk to human health; or
- (c) there is a high level of risk of contamination of water resources;

in order to:

- (i) confirm whether any site is a contaminated site; and
- (ii) define its location and extent; and
- (iii) assess the contaminant effects and risks; and
- (iv) assess the options for remediation, enforcement of liable parties or other actions, including adding the site to the Chemical Hazard Area.

**33.5.3.2** To maintain accurate and timely information about the contamination status of land, in order to:

- (a) assist in decisions regarding the monitoring, investigation and remediation options for such land; and
- (b) respond to queries about contamination status of specific locations; and
- (c) encourage landowners of sites with a history of using, storing or manufacturing hazardous substances to advise the Council so that the site can be included on the site contamination register and investigated and assessed for the presence or absence of contaminants on the site.

**33.5.3.3** To facilitate the assessment and remediation of contaminated sites by providing appropriate incentives or other resources.

**33.5.3.4** To require liable parties to undertake such assessments and remediation.

*[Policy 33.5.3.5 deleted]*

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**33.5.3.6** To avoid, remedy or mitigate the adverse effects of the discharge of contaminants from contaminated sites.

**33.5.3.7** To avoid, remedy or mitigate the adverse effects of the use of contaminated sites where the level of hazardous substances poses or is likely to pose a risk to human health or the environment.

*[Policy 33.5.3.8 deleted]*

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**33.5.3.9** To have regard to Ministry for the Environment guidelines for collecting and managing contaminated site information.

## **33.5.20 Methods of Implementation**

### **33.5.20.1 Regulatory**

- (a) Rules relating to:
  - (i) the discharge of contaminants from contaminated sites;
  - (ii) the management of hazardous substances (*see Method 5.5.20.1*);
  - (iii) contingency planning (*see Method 33.2.201*).
- (b) Rules to restrict land use and remediation activities on land in the Chemical Hazard Area.
- (c) Implement and enforce the Resource Management (National Environmental Standard on Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

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### **33.5.20.2 Investigation and Monitoring**

- (a) Development and maintenance of a Site Contamination Register that:
  - (i) identifies sites that have an historical association with the use, storage, or disposal of hazardous substances; and
  - (ii) identifies sites that are known to be contaminated following an assessment of each site; and
  - (iii) is prepared in consultation with landowners and provides information about the contamination status of their land; and
  - (iv) provides information about the contamination status of land in response to specific inquiries about a site.
- (b) Inclusion of site contamination register details on any Land or Property Information Memorandum for these sites.
- (c) Assessment of responsibility and options for remediation on a case-by-case basis taking into account:
  - (i) identification of site owners;
  - (ii) person or organisation responsible for contamination;
  - (iii) history of land ownership and management;

- (iv) scale of contamination.
- (d) Provision of advice and financial assistance for investigation, assessment and remediation of contaminated sites and sites with an historical association with hazardous substances.

### **33.5.20.3 Education and Advocacy**

- (a) Advocacy for the investigation, assessment and remediation of contaminated sites and sites with an historical association with hazardous substances.
- (b) Promotion of public awareness about contaminated sites, and the Council's Site Contamination Register.

## **33.5.30 Principal Reasons and Explanation**

The policies address the current lack of information about the location and risks of contaminated sites and sites that have an historical association with the use, storage or disposal of hazardous substances. The Council's site contamination register will assist in monitoring adverse effects arising from such sites, assessing priorities for investigation and remediation and in avoiding, remedying or mitigating the adverse effects of the use of such sites. Landowners will be informed about the contamination status of their land, and Property and Land Information Memoranda will help ensure that future landowners and the Council are aware of any information about the land that is contained on the register.

The introduction of the Resource Management (National Environmental Standard on Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations in 2011 have created additional standards that may apply to specified activities on contaminated sites, and introduce new processes for assessing and managing contaminants.

Responsibility for managing contaminated sites (including remedial action or responsibility for resource consents) may be unclear in some situations such as where occupiers rather than owners may be responsible for the contamination, where site owners cannot be identified, where the current landowner may be innocent of the contamination, or where the scale of the contamination may be beyond the resources of the person responsible. The Council will take these issues into account when assessing responsibility and options for remediation.

The Council will ensure that land uses are appropriate to the level of contamination and the potential hazards of any existing contaminated site. If a site is so contaminated as to make it unsuitable for any land use, the land will be added to the Chemical Hazard Area.

The Council will also ensure that land uses involving the use, storage and disposal of hazardous substances will be in such a way so as to avoid the creation of future contaminated sites.

## **33.5.40 Performance Monitoring Indicators**

- 33.5.40.1** The number of contaminated sites.
- 33.5.40.2** The number of remediated sites.
- 33.5.40.3** Quality of discharges from contaminated sites.

## **33.50 ENVIRONMENTAL RESULTS ANTICIPATED**

- 33.50.1** Discharges of contaminants that avoid, remedy or mitigate adverse effects.
- 33.50.2** Water quality maintained or enhanced for all water bodies of the District.

