Regional Waste Strategy for the West Coast

Prepared by the West Coast Waste Management Working Group 2004

with assistance from the Ministry for the Environment

- Adopted by the West Coast Regional Council at its September 2004 Meeting.
- Adopted by the Buller District Council at its September 2004 Meeting.
- Adopted by the Westland District Council at its November 2004 Meeting.
- Adopted by the Grey District Council at its December 2004 Meeting.

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1. Introduction

The Ministry for the Environment and Local Government New Zealand jointly released the '*New Zealand Waste Strategy – Towards zero waste and a sustainable New Zealand*' in March 2002. The New Zealand Waste Strategy (NZWS) emphasises minimising waste and managing it better. This is a cornerstone of the government's commitment to sustainable development, with local government playing a key role in planning for and achieving waste reduction.

The NZWS is not a statutory document and therefore relies on the voluntary actions of central and local government, industry associations, businesses, Maori and community and voluntary sectors to implement the Strategy programmes and achieve the national targets. The NZWS encourages regional waste management where it might achieve efficiencies in implementing policies, and encourages councils to explore ways to work with their neighbours for opportunities of mutual advantage.

The Ministry for the Environment in 2003 offered to assist with the preparation of a Regional Waste Strategy for the West Coast. This Strategy was prepared by Nikki Lawrence of the Taranaki Regional Council, on secondment to the Ministry. The West Coast Waste Management Working Group, comprising representatives of the West Coast Regional Council, Buller District Council, Grey District Council and Westland District Council guided Nikki with information and policy direction and produced the final document. The working group believes a regional strategy that addresses the issues of the NZWS will establish regional solutions to regional issues, and provide guidance toward collectively achieving the stated targets. The collaboration of the West Coast local authorities in the preparation and implementation of this Strategy is critical to its success. The targets in this document are subject to funding being made available and also the Long Term Council Community Plan consultation process.

This Strategy is developed from the directive of the NZWS, but establishes goals and targets that consider the technical constraints for waste minimisation and management in the West Coast. Although the NZWS in principle deals with all forms of waste (solid, liquid and gaseous) there is a strong focus on the solid waste element of the total waste stream, particularly that handled by local government. Therefore, solid waste (including hazardous waste) is also the key focus of this Strategy.

The objectives of the Regional Waste Strategy for the West Coast, developed by the West Coast Waste Management Working Group, are:

1. **To identify opportunities for the improved management of solid and hazardous wastes in the West Coast region**
2. **To identify where a joint approach to waste management delivers better outcomes for the community and the environment in the West Coast region**
3. **To provide a sound economic analysis of the proposed regional waste minimisation and management actions.**

The Strategy is structured in three key sections:

- The issues
- Waste targets for the West Coast region
- Taking action

The Strategy outlines the key issues specific to the West Coast region and their relationship with waste management planning. These issues form the backbone of the development of the targets and actions of the Strategy.

The NZWS encourages local government to set local targets in line with the national targets. The Strategy will include the national target, comment on the West Coast's progress toward achieving the target, and then a modified target where appropriate to apply specifically to the West Coast region and community.

This symbol indicates that the target is 'West Coast target' to be achieved by the four West Coast local authorities.

These 'West Coast targets' regionalise the NZWS and in some cases provide a staged approach to meeting the national targets. Some additional targets are also included to address region-specific issues.

The 'Taking action' section of the Strategy sets out an action plan for achieving the targets and for addressing the key waste management issues identified for the region. The action plan includes the programmes and priorities for each target.

The key steps to the successful implementation of the Strategy include its adoption by the West Coast Regional Council, Buller District Council, Grey District Council and Westland District Council. The Strategy integrates the district waste management plans and it is envisaged that over time the three waste management plans will be reviewed to be consistent with the Strategy (and therefore the NZWS) and each other if necessary.

The NZWS itself is considered to be an evolving document, and many of the policies and proposals as currently stated will require further consideration and consultation. The Ministry for the Environment carried out a review of the targets in 2003, with the draft report[1] recommending that no change should be made to the targets in the NZWS as additional experience and better information will assist future target setting. The Ministry for the Environment proposes to undertake a further review of the NZWS in 2006. Therefore, the West Coast Waste Management Working Group will review the 'West Coast targets' and 'Taking action' sections of this Strategy in 2009 and then every five years.

[1] Ministry for the Environment, 2003. *Review of Targets in the New Zealand Waste Strategy – Draft Report*. November 2003.

2. Legislative and policy framework

2.1 Regulatory framework

The Local Government Act 2002 places a legal responsibility on territorial local authorities to promote effective and efficient waste management, and requires the development and implementation of a waste management plan that provides for the collection and reduction, reuse, recycling, recovery, treatment, or disposal of waste in the district.

The Resource Management Act 1991, Hazardous Substances and New Organisms Act 1996 and the Health Act 1956 also place legal requirements for the management of waste and hazardous waste on territorial local authorities.

While waste management planning is mandatory for territorial local authorities, the Resource Management Act requires that both regional councils and territorial local authorities control the use of land for the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances.

2.2 Policy

2.2.1 Regional Solid Waste Management Strategy

The Regional Solid Waste Management Strategy (West Coast Regional Council, 1992) was prepared as a recommendation of the 1989 regional waste survey by the West Coast United Council that found that the region's 32 disposal sites were substandard in terms of operation, with ten being substandard in terms of siting.

The 1992 Strategy highlighted a number of key issues and objectives to be addressed in this Strategy, particularly:

- where possible provide waste management services based on 'user pays' principles
- reduce the amount of solid waste requiring disposal
- establish a comprehensive plan for the management and disposal of hazardous wastes

The key recommendations arising from the Strategy were:

- the necessity to establish alternative sites for the three landfills serving Westport, Greymouth and Hokitika
- the need to establish a regional hazardous waste facility
- the need to close some of the rural landfills.

These recommendations are in the process of being implemented and will be expanded on in achieving the targets of the Regional Waste Strategy.

2.2.2 West Coast Regional Policy Statement

The 'Solid and hazardous waste' chapter of the West Coast Regional Policy Statement includes the following solid and hazardous waste objectives and policies:

Objective 12.1	***To avoid, remedy or mitigate adverse effects of hazardous substances and contaminated sites on human health, ecosystems, surface and groundwater resources.***
Policy 12.1.1	*Co-ordinate with territorial authorities the establishment of an adequate regional storage and disposal system for hazardous wastes*
Policy 12.1.2	*In conjunction with other affected parties manage the use, transport and disposal of hazardous substances in a manner which avoids, remedies or mitigates adverse effects on:* *a) Public health;* *b) Water quality;* *c) Habitats of indigenous flora and fauna;* *d) Amenity values;* *e) Natural character;* *f) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga;* *g) The coastal environment, and* *h) Air quality.*
Policy 12.1.3	*Promote an awareness of the risks associated with the handling and transport of hazardous substances.*
Policy 12.1.4	*Ensure the closure and rehabilitation of any existing waste disposal facility where the discharge of contaminants has significant adverse effects unless those effects can be avoided, remedied or mitigated. Matters to be considered when determining if an effect is "significant" will include the need to protect the values listed in Policy 12.1.2.*
Policy 12.1.5	*To address the adverse effects of past waste disposal practices through the identification and rehabilitation of contaminated sites.*
Policy 12.1.6	*Require the siting, design, construction and management of waste management facilities to avoid, remedy or mitigate the adverse effects of contaminants on:* *a) Public health;* *b) Water quality;* *c) Habitats of indigenous flora and fauna;* *d) Amenity values;* *e) Natural character;* *f) The relationship of Poutini Ngai Tahu and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga;* *g) The coastal environment;* *h) Air quality;* *and have regard to national guidelines on their siting, design,construction and management.*
Objective 12.2	***The reduction of the amount of solid waste which requires disposal.***
Policy 12.2.1	*Encourage solid waste generators to produce less waste.*
Policy 12.2.2	*Promote disposal of recyclable or re-useable wastes at purpose-built facilities.*
Policy 12.2.3	*Promote the development of community-based refuse collection, disposal and reduction services.*

Objective 12.3	***To encourage the disposal of human and stock effluent from mobile sources at official disposal sites and the provision of adequate public toilet facilities along tourist routes or areas.***
Policy 12.3.1	*Avoid, remedy or mitigate the adverse effects of waste discharges on water quality from vehicles carrying stock or passengers, campervans and vehicle washing facilities.*
Policy 12.3.2	*Encourage the provision of adequate public toilet and toilet pump out facilities.*

These policies are consistent with the goals of the NZWS, and the methods included in the Regional Policy Statement to achieve the policies are integrated into the action plan of this Strategy where appropriate.

2.2.3 Regional Plan for Discharges to Land for the West Coast Region

The Regional Plan for Discharges to Land covers the discharge of solid wastes, liquid contaminants, hazardous substances and contaminated sites.

Solid contaminants

The Plan identifies three key issues for the West Coast region in terms of the discharge of solid waste contaminants to land:

1. The adverse effects of the discharge of solid contaminants to land on water, soil quality, social, cultural and amenity values, and public health.
2. The quantities of solid waste produced in the region, and the subsequent adverse effects of disposal on the environment.
3. Illegal dumping in the region and its adverse effects on the environment.

Objective 5.3	***To ensure that the adverse effects from the discharge of solid contaminants into or onto land, on water and soil quality, social, cultural and amenity values, and human health are avoided, remedied or mitigated.***
Policy 5.4.1	*To encourage waste minimisation practices in the West Coast Region.*
Policy 5.4.2	*To ensure that solid waste disposal facilities are sited, designed, constructed and managed to avoid, remedy or mitigate any adverse effects on the environment.*
Policy 5.4.3	*To use the enforcement provisions under the RMA where adverse effects associated with discharges from any operational solid waste disposal facility are not avoided, remedied or mitigated.*
Policy 5.4.4	*Promote the provision of appropriately sited and constructed waste disposal facilities to assist in the elimination of illegal waste disposal sites.*

Liquid contaminants

The Plan identifies three key issues for the West Coast region in terms of liquid contaminants being discharged to land:

1. The adverse effects on soil, water quality and human health, of the disposal of sewage from fixed sources to land.
2. The adverse effects on soil, water quality and human health, of the disposal of sewage from mobile sources to land.
3. The adverse effects on soil, water quality and human health, of the disposal of other liquid contaminants to land.

Objective 6.3	***To ensure that the adverse effects from the discharge of liquid contaminants into or onto land, on water and soil quality, social, cultural and amenity values, and human health are avoided, remedied or mitigated.***
Policy 6.4.1	*To ensure that the discharge of liquid contaminants into or onto land is of a nature or at a rate that does not exceed the ability of the land to assimilate the contaminant, and does not result in soil contamination.*
Policy 6.4.2	*To require monitoring of, and where necessary improvements to, disposal systems to ensure that the adverse environmental effects are avoided, remedied or mitigated.*
Policy 6.4.3	*To use the enforcement provisions under the RMA where necessary to ensure any adverse effects associated with system failure of on-site effluent treatment and disposal systems are avoided, remedied or mitigated.*
Policy 6.4.4	*To avoid health hazards and cultural, ecological, and aesthetic degradation of the environment from the discharge to land of sewage from mobile sources.*

Hazardous substances

The concerns for the West Coast region associated with the discharge of hazardous substances to land as included in the Plan are:

1. Lack of information.
2. Transportation, storage, use of hazardous substances.
3. Disposal and treatment of hazardous wastes.
4. Emergency planning.

Objective 8.3	***To ensure that the adverse effects from the discharge of hazardous substances into or onto land, on water and soil quality, social, cultural and amenity values, indigenous flora and fauna, and human health are avoided, remedied or mitigated.***
Policy 8.4.1	*To promote good practice for storing, transporting and using hazardous substances, including promoting adherence to relevant codes of practice and guidelines, where appropriate.*
Policy 8.4.2	*To avoid inappropriate or uncontrolled disposal of hazardous wastes to land.*
Policy 8.4.3	*To provide for the mitigation of adverse effects associated with the accidental discharge of hazardous substances, by requiring the preparation of contingency plans where appropriate.*
Policy 8.4.4	*To adopt an inter-agency coordinated approach to the management of hazardous substances.*

Contaminated sites

The Plan identifies three key issues for the West Coast region with regard to contaminated sites:

1. Location and classification.
2. Management and liability.
3. Prevention of future contaminated sites.

Objective 9.3	***To avoid, remedy, or mitigate risks to the environment presented by discharges from contaminated sites, including risks to human health, social, cultural and amenity values, and soil and water quality.***
Policy 9.4.1	*To locate and investigate contaminated sites in the West Coast region.*

Policy 9.4.2	*To contain and remediate, or require containment and remediation of, contaminated sites that are causing adverse effects on the environment.*
Policy 9.4.3	*To promote, and where necessary require, the adoption of management practices that avoid or mitigate the potential for future contamination.*

These policies are consistent with the goals of the NZWS, and the methods included in the Regional Plan for Discharges to Land to achieve the policies are integrated into the 'Action plan' of this Strategy where appropriate.

2.2.4 West Coast Regional Council Contaminated Sites Management Strategy

The Contaminated Sites Management Strategy outlines the West Coast Regional Council's approach to ensuring that a coordinated and effective approach to the management of contaminated sites is taken.

The overall goal of the strategy is to ensure that adverse human health and environmental effects that result from the contamination of land are eliminated or reduced to a minimum. Through the implementation of the strategy the West Coast Regional Council anticipates to:

- Meet its statutory obligations more effectively and efficiently
- Reduce any potential liability
- Achieve better integration, coordination and communication of current and future initiatives.

The initiatives included in the Strategy are integrated into the 'West Coast targets' and 'Action plan' sections for contaminated sites of this Strategy where appropriate.

2.2.5 Waste management plans

The preparation of a waste management plan by each district council is a legislative requirement of the Local Government Act 2002. The Buller and Westland districts have operative waste management plans (October 2002 and March 2002 respectively) and Part 1: Solid Waste of the Grey district waste management plan is currently proposed. These Plans were prepared with consideration of the NZWS and therefore reflect some of the key concepts of this Strategy.

These waste management plans form the basis for waste management planning at the district level. The plans include methods to achieve the policies that are integrated into the 'West Coast targets' and 'Action plan' chapters of this Strategy.

2.2.6 Annual plans

All three West Coast territorial authorities include solid waste management, including waste minimisation, in their Annual Plans. Refer to the current Long Term Council Community Plan for each Council for the relevant details.

2.3 West Coast Waste Management Working Group

The West Coast Waste Management Working Group was established in 1999. The role of the Group is to take an integrated and co-ordinated approach to dealing with waste management issues for the whole West Coast region, and in particular hazardous waste management (in response to Policy 12.1.1 of the West Coast Regional Policy Statement). The 'essential' tasks of the Group as outlined in the Terms of Reference (July 2000) include:

- Provide a forum for consultation for integrated waste management;
- Collate and disseminate information on waste management in order to enhance community awareness and participation;
- Develop a regional strategy for hazardous wastes;
- Liaise with other councils, community groups and other interested groups in waste management.

These tasks support the objectives of the Regional Waste Strategy – to identify opportunities for the improved management of solid and hazardous wastes and to identify where a joint approach delivers better outcomes for the region.

The key projects that the Group has worked on since 1999 are:

- Hazardous waste survey to identify types and volumes of hazardous waste in the region (February 2001)
- Hazardous waste collection at one site in each district (May 2002)
- Waste management education feature in the local newspaper (August 2002)
- Pre-feasibility study for a pyrolysis plant on the West Coast (February 2004)
- Campervan waste disposal site pamphlet (March 2004)
- Hazardous Waste collection at 18 sites (May 2004)

3. The issues

3.1 Why a Regional Waste Strategy for the West Coast?

The key purpose for developing a Regional Waste Strategy for the West Coast is to take the messages and objectives of the NZWS and adapt them to the West Coast situation.

In fitting with this purpose, the Strategy is an integration of existing waste management policy for the West Coast that draws on the goals and objectives of the NZWS. Where appropriate the Strategy has been developed from the objectives and targets of the:

- West Coast Regional Council Waste Strategy (1992);
- West Coast Regional Policy Statement (2000);
- Regional Plan for Discharges to Land for the West Coast Region (2002);
- West Coast Regional Council Contaminated Sites Management Strategy (2002);
- Buller District Council Solid Waste Management Plan (2002)
- Westland District Council Solid Waste Management Plan (2002); and
- Grey District Council Proposed Waste Management Plan Part 1: Solid Waste.

The NZWS was adopted by West Coast local authorities with the provision that the implementation of the NZWS is appropriate to the region. The preparation of this Strategy is a critical step in 'regionalising' the NZWS to the West Coast context.

Both the NZWS and the district waste management plans encourage coordinated waste management programmes where there are opportunities for mutual advantage. This concept has been instigated in the West Coast through the initiatives of the West Coast Waste Management Working Group. The Strategy will expand on the success of these initiatives and establish new objectives for the West Coast to collectively work together to make positive changes for waste minimisation and management.

3.2 The NZWS in the West Coast region

The NZWS is a national strategy with overarching targets for all New Zealanders to work toward the long-term challenge of *toward zero waste and a sustainable New Zealand.* The Strategy recognises the need for new waste management programmes that shift the focus from waste generation and disposal to avoiding waste, resource re-use and recycling.

The NZWS recognises that there are factors that limit a communities ability to achieve 'zero waste' and that the best environmental, social and economic solutions will vary for different wastes and different areas. Such factors include:

- New Zealand's special character
  Towns and cities are widely dispersed and transporting low volumes of wastes and recyclables long distances is expensive.
- Inaccurate pricing and charging
  The full cost of waste generation and disposal are not all covered by the price of waste treatment or disposal.
- Unreliable markets
  There are markets for some recyclable materials, however few are reliable and consistent.
- Hard choices

Many communities have limited resources and will need to prioritise between managing and remediating contaminated sites, upgrading wastewater treatment plants, improving hazardous waste handling and treatment processes, or upgrading or closing substandard landfills.

- Cost recovery from waste generators
  Includes ensuring tourists to the West Coast region contribute to the costs associated with waste disposal
- Community perception
  There is a growing community expectation that recycling initiatives will be provided by local authorities. While this is achievable in the West Coast, the scale of the activity compared with higher populated areas will likely result in higher proportional costs to the local community.

The West Coast region is unique. The West Coast is New Zealand's fifth largest region, with the 30,300 population dispersed across relatively small settlements spread along its 550 kilometres. The settlements are separated by tracts of unoccupied land, generally conservation land which creates difficulties for the effective provision of services. Approximately 87% of the West Coast land area is managed by the Crown.

The West Coast economy has traditionally relied on natural resources – gold, coal, dairying, timber and fisheries. In recent time the West Coast has faced the loss or decline of some primary industries, including gold mining and indigenous forestry. Currently, the three core 'driver' industries in the West Coast economy are dairying, tourism and mining[2]. These industries are growing strongly and are expected to be between 50% and 100% larger by 2010.

3.3 Key issues for waste management in the West Coast region

In developing policy and programmes for waste minimisation and management in the West Coast the following issues must be considered:

- ensure that waste services are available and affordable to all of the west Coast community, while taking into account:
  - the small and dispersed settlements throughout the region
  - the low rating base of all West Coast local authorities
  - the distance from markets that can reuse and / or recycle waste
  - the impact of tourism on the waste stream both directly (generated by visitors) and indirectly (generated by services provided for visitors)
- predicted future demand (influenced by waste minimisation, population changes and visitor numbers)
- the lack of community understanding that good waste management is a community responsibility
- the lack of education and promotion programmes and available information on waste minimisation initiatives and responsible solid waste management
- using incentives and appropriate charges to encourage and assist the community to make informed and responsible choices regarding their waste disposal
- the higher standards of waste management infrastructure that is required and the significant costs to meet the standards
- the need to support a clean, safe, sustainable and attractive physical environment

[2] Venture West Coast, Business and Economic Research Ltd and Beca Carter Hollings & Ferner Ltd, 2002.

- the need to encourage and assist the separation and controlled disposal of hazardous and special wastes
- the potential benefits of co-operation between the region's local authorities in providing region-wide integrated waste management services.
- the need to focus on local solutions to local problems.

Remote communities

As outlined in section 3.2 above the West Coast region has one of the largest land areas in New Zealand with a small, dispersed predominantly rural population. The distances between these settlements create difficulties for the cost-effective provision of waste management services. Key factors include:

- high transport costs associated with servicing distant communities from main centres
- adverse environmental effects from road transport over long distances, including consideration of the Kyoto protocol and CO_2 emissions
- the costs associated with providing a high standard of waste services to all rural communities in the region
- identifying appropriate technology for small, remote communities that is both cost effective and provides a high level of environmental protection.

Available markets for recycling

The availability of community recycling facilities for all dry recyclable material – paper, cardboard, plastics, aluminium cans and glass – is becoming a public expectation associated with refuse collection and disposal. While this concept of maximum diversion of all reusable or recyclable materials from the waste stream is supported by this Strategy, there are restrictions to achieving such diversion.

The viability of any recycling programme is dependent on the availability of a market for the resource and the volume of recyclable material available. Recycling in the West Coast is currently only viable where the markets for the collected materials are strong (as for steel and cardboard) or there are markets within the region. The difficulty with such adhoc methods is that although there are strong markets for some recyclables, inconsistencies in others often results in community objection when material separated from general refuse is landfilled, often as a result of available storage space being exceeded before a market is available. Details of current recycling initiatives are included in the 'Waste minimisation' targets section of this Strategy. The establishment and operation of recycling is labour intensive, potentially providing significant community benefit for the West Coast region through job creation.

Tourism

Significant tourist numbers are attracted to the West Coast region to experience 'Middle Earth' New Zealand with the most frequented attractions and activities revolving around the region's natural attractions (predominantly on Crown-managed lands). The number of visitors to the West Coast is predicted to increase almost 29% by 2009, well above the national average of 21%, with international visitors aged 20-29 years of age dominating by 2009. Most international visitors journey the West Coast by private/rental car, including rental campervans, (46% of the total) or by coach tour (21%)[3].

[3] Tourism Research Council New Zealand. Web site accessed 06/04/2004 http://www.trcnz.govt.nz/NZ+Regions/South+Island/West+Coast+Region/default.htm

Tourism to the region is projected to further increase following the international success of *The Lord of the Rings* trilogy and associated media interest in the region, including the US publication *Newsweek* (January 2004) recommending in its 'Top 10' world attractions to '*Visit Middle Earth in a campervan*'.

While increasing tourist numbers to the region is encouraged, there is a need to protect New Zealand's 'Clean and Green' international reputation with sound environmental practices in these remote bush-clad areas. In recognising the role of the local authorities, especially with regard to waste management issues, the distance of main attractions from service towns leads to increased costs and the need for the Department of Conservation to be encouraged to take a proactive role in waste management in the West Coast region.

The Ministry for the Environment has received a letter from the West Coast *Tai Poutini* Conservation Board noting their support for improved waste management in the region. The involvement of Department of Conservation in the preparation of this Strategy is significant progress in taking a collective approach to waste minimisation and management on the West Coast. The continued involvement of all parties throughout the implementation of this Strategy is anticipated.

Waste disposal options

Per head of population, the West Coast region has more landfills than any other region in New Zealand. This is a direct reflection of the remote location of many small communities, and the need to provide waste management options to these residents. Of greatest concern is that many of these small, rural landfills do not meet national guidelines for landfills. The national guidelines advocate the containment of waste and breakdown products (including leachate collection and surface water management) as well as good operational practices at each site.

The West Coast Discharges to Land Regional Plan states three issues in relation to solid waste:

1. The quantity of waste disposed
2. The adverse effects of waste disposal
3. Illegal dumping

The approach of this Strategy is to establish a balance for the West Coast community between meeting best practice guidelines for waste disposal and the provision of the best practicable option for the West Coast situation.

Disposal charges

In the recent past, most landfills on the West Coast have provided free waste disposal to the local and wider community. The NZWS encourages councils to move toward full cost pricing principles to promote waste reduction and make the community aware of the true cost of their actions.

Key factors to consider when determining waste disposal charges include:

- that the charges will encourage the desired actions
  - no or insignificant charging will not encourage communities to reduce, reuse or recycle their 'waste'
  - charging more than the community is willing to pay may result in increased back yard burning and illegal dumping

- that charging mechanisms can be used to encourage separation of the waste stream and diversion from landfill
- that the collection of the charge is administratively efficient and therefore economic

The utilisation of direct user charges to achieve the targets of this Strategy are discussed in the 'Waste disposal' targets section of this Strategy.

Hazardous waste
Due to their potentially dangerous nature, hazardous wastes have special handling and aftercare requirements and therefore have higher management costs than general refuse. Landfills generally are able to receive only limited types of hazardous waste. The key to the management of hazardous wastes is separation from general refuse to provide for controlled disposal.

There are two key elements required to ensure such actions:
- the provision of designated hazardous waste facilities at landfills and resource centres; and
- education programmes that encourage the community to sort hazardous wastes from general refuse before disposal.

The West Coast local authorities have previously carried out trial hazardous waste collections throughout the region. Future opportunities for hazardous waste collection and disposal are discussed in the 'Hazardous wastes' targets section of this Strategy.

Funding priorities of local government
Increasing community expectation and environmental and health standards for the provision of local government services is placing pressure on the limited funding resources available for such projects. All districts in the West Coast region are facing increasing costs for water and sewage treatment facilities, in a region with a relatively low rating base. Therefore, in comparison to the provision of water and sewage systems to the community, waste management is often of lesser priority.

Integrated waste management
Nationally there is a trend towards greater co-operation between local authorities in providing waste services, and towards more regional service delivery. The West Coast Waste Management Working Group was established in 1999 and has worked together on solid and hazardous waste management. This Strategy is a key driver in formalising the co-ordination of waste management initiatives for the West Coast.

These key issues for waste management in the West Coast will be referred to and expanded on throughout this Strategy, particularly in the following 'Waste targets for the West Coast region' section.

4. Waste targets for the West Coast region

The NZWS encourages local government to set local targets in line with the national targets. This section includes the national target, comment on the West Coast's progress toward achieving the target, and then modified targets where appropriate to apply specifically to the West Coast region and community.

This symbol indicates that the target is a 'West Coast target' to be achieved by the four West Coast local authorities.

Some additional targets are also included to address region-specific issues. A comparative matrix of the NZWS and Regional Waste Strategy targets is included in Appendix I.

4.1 Waste minimisation

In the past, waste policies have tended to focus on "end of pipe" solutions, dealing with the effects of disposal rather than prevention of waste. These policies are no longer sufficient to meet the challenge of de-coupling economic development and the generation of waste, and to close the loop on resource use and waste generation. Factors such as greater environmental awareness, increased cost of disposal as a result of higher landfill standards, and the NIMBY (not in my backyard) response to landfills, have driven serious consideration of waste minimisation as an alternative to continued disposal.

There are a number of groups that have roles or interests in waste minimisation. Businesses have a role in waste reduction, directly as waste generators, and indirectly as designers, manufacturers and distributors of the products and services we use. Organisations such as Business Care have roles to play in promoting 'triple bottom line' reporting and the economic advantages of waste minimisation practices. Some industry associations such as the Waste Management Institute of New Zealand (WasteMINZ), New Zealand Water and Wastes Association (NZWWA) and Recycling Operators of New Zealand (RONZ) have a direct interest in waste. Many others such as Plastics NZ, Packaging Council of New Zealand, New Zealand Business Council for Sustainable Development, and Business New Zealand also have an interest. Many of these associations facilitate discussion, consultation and training on industry waste and waste minimisation issues.

A number of community and voluntary groups are involved in the provision of recycling services, resource recovery parks and education programmes for waste reduction and recycling (such as Zero Waste New Zealand Trust). These groups represent a range of concerns, including employment trusts, environmental groups and groups with specific interests.

Objectives:

- To reduce the amount of waste produced by raising awareness of waste issues and encouraging waste producers to change their practices
- To divert as much 'waste' as possible from being disposed of to landfill, through reuse and recycling systems
- To have no recyclables disposed of to landfill where they can be recycled at a lower net cost.

Waste minimisation encompasses all the concepts of waste reduction, reuse, recovery and recycling.
Waste reduction involves reducing the quantity and toxicity of waste materials at the source of production. Producing less waste is the most cost effective and environmentally sound means of waste minimisation. Key concepts for reducing waste include:

- Cleaner production programmes – focuses on production processes rather than on the product itself, aiming to improve resource efficiency and reduce waste generated during production.
- Design for the Environment – covers elements of product design that reduce waste and other environmental effects.
- Green purchasing – favouring products and services that minimise their environmental effects throughout production, use and disposal. Buying environmentally preferable products and services increases the size of the market for them, and encourages other producers to improve products and processes in order to compete.

Reuse and recycling provide further opportunities to divert waste from landfills. Successful reuse and recycling initiatives are strongly dependent on the strength of a market for the material. Therefore, historically such initiatives have predominantly been provided by the private sector. However, the availability of community recycling facilities is becoming a public expectation of local authorities associated with refuse collection and disposal.

While community recycling initiatives encourage diversion of all reusable or recyclable materials from landfill disposal, there are barriers. Recycling in the West Coast is currently only viable, and therefore provided for, where there are markets within the South Island. Current initiatives include:

- Car bodies, metals and white-ware are separated from the waste stream at most landfills and stored before compaction and out-of-region recycling by a private contractor.
- Paper and cardboard is recycled throughout the West Coast by local operators. Grey District Council provides paper and cardboard recycling facilities at McLean's landfill and resource centres at Blackball, Nelson Creek and Moana. There is an opportunity to increase the volume recycled through the promotion of existing services.
- Aluminium can collection sites are located throughout the region and managed by schools, Scouts and other community groups as fundraising initiatives.
- Glass is stockpiled at landfills and resource centres throughout the region. A small amount is crushed and used in sandblasting operations. The rest of the separated glass at the resource centres is discarded.
- Currently 1 and 2 type plastics separated at source are sent to Christchurch for recycling, other plastics are disposed to landfill.
- Waste oil is collected by many businesses throughout the region.

Local authorities will report their progress on waste minimisation and management for their annual report in 2001-2 and quantitatively on an annual basis from then onwards.

The Buller District Council and Westland District Councils are 'Zero Waste Councils' with a commitment toward zero waste to landfill by 2015. Grey District Council is currently investigating becoming a 'Zero Waste Council', having included a general waste management policy of "*zero waste to landfill by 2035*" in its draft Waste Management Plan.

The 'zero waste' concept is supported by the Zero Waste New Zealand Trust. The ultimate goal of zero waste is to minimise and eventually eliminate waste, however recognises that 'zero' is the goal to work towards, not an unpractical commitment to achieve 100%.
The three district waste management plans require the Councils to monitor progress in implementing the Plan and include performance measures in each Annual Plan. These performance measures will then be reported on in the Annual Report.

The West Coast Regional Council reports on the waste minimisation and management practices of its core business – specifically with regard to hazardous wastes and contaminated sites.

Local authorities in the West Coast will report quantitative assessments on waste minimisation and management in their annual reports from 2003/2004 onwards.

By December 2005, all regional councils will ensure that new or renewed industrial resource consents include a recognised waste minimisation and management programme and will report on the percentage of all consents under their jurisdiction that have such a clause.

It is not always lawful to require industrial resource consents to include a waste minimisation and management programme. This requirement would only be appropriate for certain consent purposes. Where it is appropriate, West Coast Regional Council supports the introduction of a requirement for such programmes to be included with applications for new or renewed resource consents.

As of June 2004, West Coast Regional Council will, where the purpose of the consent makes it appropriate and legally possible, require by way of a condition on a new or renewed resource consent to include a waste minimisation and management programme. West Coast Regional Council will report on the percentage of all consents under their jurisdiction that have such a condition.

By December 2005, at least 10 major businesses will be participating alongside central and local government in developing and promoting waste minimisation programmes within their sector.

This is a national target.

Ninety-five percent of the population will have access to community recycling facilities by December 2005.

Each district council has the aim of disposing no recyclables to landfill where they can be recycled at a lower net cost. The cost of recycling, particularly the transport of recyclable material to its market, is the most significant barrier to recycling initiatives on the West Coast.

However, as stated above, community recycling facilities are available where there is a viable market for the recycled materials. These markets are highly variable, so communication with the community in regard to what products can be recycled and when will provide certainty and encouragement to the community that materials separated from the general waste stream for recycling will actually be recycled.

Currently all controlled landfills and resource centres provide collection points for recyclables. While the provision of a kerbside collection for recyclables does encourage recycling by making it easier for the individual, the costs make it prohibitive in the West Coast region.

Where there is a viable market for a recyclable product, ninety-five percent of the West Coast population will have access to community recycling facilities for these materials by December 2005.

Definition of 'access'
"Access is defined for the purpose of this Strategy as being no more than a 60 minute round trip by car away from a landfill or resource centre at which during operating hours the public can drop off recyclables, including glass, paper, cans, tins and plastics, free of charge."

By December 2005, territorial local authorities will ensure that building regulations incorporate reference to space allocation for appropriate recycling facilities in multi-unit residential and commercial buildings.

Territorial local authorities do not write the building regulations and therefore cannot enforce a condition that is not written in the building code. The district councils will however actively encourage designers to include space for recycling facilities as part of the consent application.

The district councils will actively encourage designers to include space for recycling facilities as part of the resource consent application.

By December 2005, all councils will ensure that procedures for waste minimisation have been addressed for all facilities and assets they manage and will have set target reductions based on public health, environmental and economic factors.

West Coast Regional Council
The West Coast Regional Council developed an internal environmental policy in 2001. The policy includes staff tips and management directives for energy saving, waste minimisation , re-use of paper and cardboard boxes, recycling of non-re-usable paper and cardboard, and green purchasing initiatives.

Buller District Council
Buller District required separation of waste paper in its offices for recycling until the recycling operation folded making it an un-worthwhile exercise. The Council will reintroduce such a system when recycling is available. The Council offices use energy efficient lighting and computers and staff are required to 'switch off' when not in use.

Grey District Council
Grey District Council recycles paper and cardboard at its main office but does not have an internal environmental policy in place. Establishing targets for in-house waste minimisation targets will require corporate buy-in across all divisions of the Council.

Westland District Council
Westland District Council has an in-house recycling programme for paper, cardboard, plastics and computer equipment and some green purchasing. The Council is considering incorporating waste minimisation requirements to contracts as they come up for renewal, such as the Information Centre, swimming pool etc.

By December 2005 West Coast Regional Council and the three district councils will have investigated opportunities for implementing waste minimisation programmes for the facilities and assets they manage.

By December 2006 West Coast Regional Council and the three districts will ensure that procedures for waste minimisation have been addressed for all facilities and assets they manage and will have set target reductions based on public health, environmental and economic factors.

By December 2010, all regional councils will ensure that at least 25 percent of all existing industrial resource consent holders have in place a recognised waste minimisation and management programme.

Not all industrial operations require a resource consent under the Resource Management Act 1991. It is the view of the West Coast Regional Council that although it cannot use the resource consent process to ensure the adoption of waste minimisation and management programmes, the encouragement of industrial operators to adopt such programmes should be pursued and should not be restricted to consent holders.

West Coast Regional Council will encourage the adoption of waste minimisation and management programmes and endeavour for at least 25% of all industrial operations to have addressed waste minimisation and management by December 2010. This may be done through informal means if there are no legal processes that allow this.

4.2 Organic wastes

Organic waste makes up the largest proportion of the waste stream disposed to landfill in the West Coast. Organic waste includes wastes from agricultural sources, garden waste (green waste), kitchen waste, food-processing wastes and sewage sludge. When organic waste is landfilled, it degrades, and leachate and landfill gases (predominantly methane) are produced. If not collected and treated appropriately leachate can contaminate groundwater and surface waters, while methane is a greenhouse gas 21 times more damaging than carbon dioxide.

The diversion of organic waste from landfills significantly decreases the volume of waste being disposed of and potentially reduces the adverse effects on the receiving environment. Organic waste can also be a useable resource in its own right. Options for organic waste diverted from landfill include:

- home composting / worm farms;
- mulching / chipping;
- central composting;
- large-scale commercial worm farms;
- pyrolysis; and
- anaerobic digestion.

Stockpiled greenwaste at McLeans landfill is also used as final cover material for site restoration.

Objective:

- To maximise the quantity of organic material diverted from the waste stream via composting or other appropriate technologies.

Green waste makes up the most significant volume of the organic waste stream on the West Coast, due to the temperate climate and large property sections. Therefore, the most significant gains to be made in diversion from landfill would be to target green waste.

Charging policies for landfill disposal are currently used throughout the West Coast to encourage separation of green waste from general refuse. At most controlled landfill and resource centre sites green waste is accepted at no charge when separated from general refuse, however Westland is currently proposing to introduce a small charge to meet handling costs. The green waste collected is then stockpiled on site for a range of future options, including firewood, top cover for site restoration and mulching or chipping for garden products. However, at uncontrolled sites there is little or no diversion of green waste. Westland District Council has received proposals from private companies to mulch and compost the collected green waste.

Consistent charging policies at all disposal sites across the region for all waste streams could result in further diversion of organic waste, particularly green waste, from landfill. However, the setting of disposal charges must consider the impact of adverse effects, such as increased incidents of fly-tipping (especially of green waste) and the release of pest plant species into the nearby conservation land. Appropriate charges may encourage individuals to set up home composting or other disposal systems for household organic wastes.

By December 2003, all territorial local authorities will have instituted a measurement programme to identify existing organic waste quantities, and set local targets for diversion from disposal.

The NZWS identifies that the lack of information about waste hinders good policy-making and target-setting, and that we need standardised measuring systems to establish baseline data and trends.

Regular SWAP surveys at the Hokitika landfill and quantity data collected for Hokitika, Grey and Westport landfills does provide a starting point for data collection. Operators of some landfills and resource centres have an understanding of the volumes of green waste diverted from landfill, however there is no formal system for consistent and accurate reporting of such information. At uncontrolled sites there is no means for collecting such information.

A key element of reaching these targets is that all landfills and resource centres are controlled, with reporting requirements included in the operational contracts. This will provide for consistent data throughout the region. Local targets for diversion from landfill disposal can then be established and reviewed as new information on waste quantities and the types of wastes becomes available.

By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled.

By June 2005 all territorial local authorities will have set targets for the diversion of organic waste from disposal.

By December 2005, 60 percent of garden wastes will be diverted from landfill and beneficially used, and by December 2010, the diversion of garden wastes from landfill to beneficial use will have exceeded 95 percent.

As outlined above there is only a small amount of baseline data with regard to the volume of green waste currently disposed of to landfill or diverted from landfill.

The local authorities will continue to advocate separation of green waste from general refuse before disposal, and educate the community on options for garden waste disposal, including home composting and disposal at resource centres. There is also an opportunity to work with the Department of Conservation in educating communities of the issues associated with fly-dumping of garden waste, especially on conservation lands. Buller District Council recently co-ordinated a home composting campaign, offering vouchers for $20 discount off composting systems from local suppliers. The Council may consider repeating this offer in conjunction with publicity on the increasing costs associated with solid waste disposal.

By December 2005 the West Coast Waste Management Working Group will investigate options for the 'beneficial use' of garden waste on the West Coast.

The local authorities in the West Coast will continue to promote beneficial uses of garden wastes so that by December 2010, 75 percent of garden waste is used for the most beneficial use.

By December 2007, a clear quantitative understanding of other organic waste streams (such as kitchen wastes) will have been achieved through the measurement programme established by December 2003.

In the West Coast, kitchen waste does not represent a significant portion of the organic waste stream. However, the collection of baseline data is necessary in order to set diversion targets. There is also an opportunity to work with the hospitality industry in providing alternative options for the recovery of their organic waste stream.

By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled.

By December 2007 a clear quantitative understanding of other organic waste streams will have been achieved.

By December 2007, more than 95 percent of sewage sludge currently disposed of to landfill will be composted, beneficially used or appropriately treated to minimise the production of methane and leachate.

Grey District Council

It was recognised before resource consents were applied for the Greymouth Sewage Treatment Scheme that the by-products of treatments plants (sewage sludge) would also have to be disposed of. Therefore, the resource consent application for McLean's landfill specifically included sewage sludge as a substance to be deposited in the landfill. That is the Council took a responsible approach in ensuring all aspects of solid and liquid waste were managed.

It is noted that the actual amounts of sewage sludge that will be produced from a population of 8000 (the catchment area for the new scheme) will not be significant. Based on known volumes produced from the Karoro Sewage Treatment Plant it is estimated that the Greymouth Plant would produce 100 to 200 cubic metres of sludge per year. Therefore the national target of a '95% reduction' in sewage sludge to landfill seems unrealistic given the small quantities that are likely to be deposited in the first place.

It is recognised that there may be other uses for the sewage sludge, rather than deposit in the landfill, however it is likely that given the volumes produced such options may not be economically viable.

Westland District Council

No sewage sludge disposed to landfill therefore meet NZWS target.
4800 reticulated sewage, 4000 (approx. 40%) septic tank system
Investigating on-site options, composting

Buller District Council
Currently there is no sewage sludge to dispose of in Buller.

Westport and Reefton WWTP are currently being investigated for commissioning about 2004/05. Both plants are not expected to be required to be desludged for a period of at least 25 years. It is expected that technology advances over this time will result in the screenings not being disposed of to landfill.

By December 2007, more than 95 percent of sewage sludge currently disposed of to landfill will be composted, beneficially used or appropriately treated to minimise the production of methane and leachate

The West Coast territorial local authorities are working toward achieving the national target.

By December 2010, the diversion of commercial organic wastes from landfill to beneficial use will have exceeded 95 percent.

There is currently no baseline data for commercial organic wastes disposed to landfill. A better understanding of this sector is required before setting diversion targets.

By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled, including sources of commercial organic wastes.

The West Coast local authorities will work with commercial businesses to set targets for the diversion of organic wastes from landfill.

4.3 Special wastes

The NZWS defines special wastes as '*wastes that cause particular management and/or disposal problems and need special care*'. Examples of special wastes include used oil, tyres, end-of-life vehicles, batteries and electronic goods. It is recognised in the NZWS that initiatives to address special wastes should be initiated by the relevant business sector or central government, so that the same rules are applied consistently throughout the country.

By December 2005, businesses in at least eight different sectors will have introduced extended producer responsibility pilot programmes for the collection and reuse, recycling, or appropriate treatment and disposal of at least eight categories of special wastes.

This is a national target. The West Coast local authorities will support national business or government sector initiatives to achieve this target.

4.4 Construction and demolition wastes

Construction and demolition waste consists of waste building materials, packaging, and rubble from the construction, renovation, and demolition of buildings and roads (e.g. concrete, wood, metals, asphalt).

Construction and demolition wastes make up a significant proportion of the solid waste stream in New Zealand. Construction and demolition waste is often reused where possible, especially in rural communities, or disposed of to cleanfills as opposed to landfill due to disposal costs.

Construction and demolition waste includes inert wastes such as soil, rock, concrete and bricks that can be disposed of to cleanfills with minimal adverse effects on the surrounding environment. However, not all construction and demolition waste is suitable for disposal in cleanfills.

The Ministry for Environment released 'A Guide to the Management of Cleanfills' in January 2002. This document details the waste acceptance criteria for cleanfills. Table 1 below outlines materials acceptable for disposal in cleanfills.

Table 1 Cleanfills – acceptable materials[4]

Material	Discussion
Asphalt	Weathered (cured) asphalt is acceptable: After asphalt has been exposed to the elements for some time, the initial oily surface will have gone and the asphalt is considered inert.
Bricks	Inert – will undergo no degradation
Ceramics	Inert.
Concrete – un-reinforced	Inert material. Ensure that other attached material is removed.
Concrete – reinforced	Steel reinforcing bars will degrade. However, bars fully encased in intact concrete will be protected from corrosion by the concrete. Reinforced concrete is thus acceptable provided protruding reinforcing steel is cut off at the concrete face.
Fibre cement building products	Inert material comprising cellulose fibre, Portland cement and sand. Care needs to be taken that the product does not contain asbestos which is unacceptable.
Glass	Inert, and poses little threat to the environment. May pose a safety risk if placed near the surface in public areas, or if later excavated. The safety risk on excavation should become immediately apparent, so glass is considered acceptable provided it is not placed immediately adjacent to the finished surface.
Road sub-base	Inert.
Soils, rock, gravel, sand, clay etc	Acceptable if free of contamination
Tiles	Inert

Construction and demolition wastes which are not acceptable as cleanfill include asbestos, abrasive blasting sand / agents, new asphalt, bark, cables, carpet, containers, corrugated iron, electrical equipment and insulation, formica, greenwaste, hardboard, MDF, metals, paint and painted materials, paper and cardboard, chipboard, plywood, sawdust, tar, processed timber and wood chips. Other alternatives to cleanfilling are required for these wastes. The safe disposal of CCA treated timbers (a high proportion of the construction and demolition waste stream) needs to be investigated.

Tourism development is one of the strongest growth areas in the West Coast. While there is a high amount of construction, a lot of this construction is re-modelling of existing structures.

[4] Ministry for the Environment, 2002. *A Guide to the Management of Cleanfills*, Beca Carter Hollings & Ferner Ltd, January 2002.

Cleanfills in West Coast
Cleanfills are permitted up to 5000m^3 volume provided only inert materials are deposited. There are four consented cleanfills in the region and two more currently in the consent process. Cleanfills are monitored for consent compliance and meet the Ministry for the Environment cleanfill guidelines.

Buller District Council
There are no Council operated cleanfills in the Buller district. Cleanfill is accepted at the Westport landfill at no charge to be used as cover material.

Westland District Council
There are two privately owned and operated cleanfills at Hokitika. The Council uses cleanfill material diverted from landfill at its resource centres as top-cover for rehabilitation of landfill sites.

Grey District Council
Three resource centres in the Grey district operate as cleanfill / green fill sites – Blackball, Moana and Nelson Creek. The cleanfill is used to rehabilitate the site and as low-cost cover material for landfills. Many closed dumps in the Grey district are being used as cleanfill sites for rehabilitation to open space recreation areas such as Messenger Park in Blaketown.

There are a number of demolition yards throughout the West Coast where a variety of building materials including doors, windows, bathroom and kitchen units are bought and sold. These outlets divert components of the construction and demolition waste stream to re-use. There are also a number of scrap metal dealers who pay for scrap metal and therefore divert some of the metal component of the construction and demolition waste from landfill to re-use or recycling.

Charging policies for landfill disposal are currently used throughout the West Coast to encourage separation of cleanfill from general refuse. At most controlled landfill and resource centre sites cleanfill is accepted at no charge when separated from general refuse for use as top cover for site restoration. However, at uncontrolled sites there is little or no diversion of cleanfill.

By December 2005, all territorial local authorities will have instituted a measurement programme to identify existing construction and demolition waste quantities and set local targets for diversion from landfills.

The NZWS identifies that the lack of information about waste hinders good policy-making and target-setting, and that we need standardised measuring systems to establish baseline data and trends. Operators of some landfills and resource centres have an understanding of the volumes of wastes diverted from landfill, however there is no formal system for consistent and accurate reporting of such information. At uncontrolled sites there is no means for collecting such information, however the district councils are working toward controlling all sites.

A key element of reaching these targets is that all landfills and resource centres are controlled, with reporting requirements included in the operational contracts. This will

provide for consistent data throughout the region. Local targets for diversion from landfill disposal can then be established and reviewed as new information on waste quantities and the types of wastes becomes available.

By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on construction and demolition waste quantities being landfilled.

By December 2005 all territorial local authorities will have set targets for the diversion of construction and demolition waste from disposal.

By December 2008, there will have been a reduction of construction and demolition waste to landfills of 50 percent of December 2005 levels measured by weight.

As outlined above, there is no accurate baseline data with regard to the volume of construction and demolition waste currently disposed of to landfill or diverted from landfill. It is also necessary to recognise that much of the construction and demolition waste volume that is landfilled will have no re-use or recycling option.

When the quantities of construction and demolition waste going to landfill has been established a realistic target for diversion will be set.

Territorial local authorities will set targets for the diversion of construction and demolition waste from landfill disposal once baseline data has been collected.

By December 2008, 95 percent of cleanfill will have been diverted from landfill (excluding where cleanfill is used as top cover for site restoration).

4.5 Hazardous wastes

A waste is considered hazardous if it poses a risk to people or the environment. Hazardous wastes are by-products of many industrial and commercial processes and can be solids, liquids or gases.

The Ministry for the Environment draft definition of hazardous waste is 'A hazardous waste is any waste that:

- Contains hazardous substances at sufficient concentrations to exceed the minimum degrees of hazard specified by *Hazardous Substances (Minimum Degrees of Hazard) Regulations 2000* under the *Hazardous Substances and New Organism Act 1996*; or
- Meets the definition for infectious substances included in the *Land Transport Rule: Dangerous Goods 1999 and NZ Standard 5433: 1999 - Transport of Dangerous Goods on Land*; or
- Meets the definition for radioactive material included in the *Radiation Protection Act 1965 and Regulations 1982*.'

The definition, together with the New Zealand Waste List will provide a consistent method to identify hazardous waste. The classification system of the New Zealand Waste List will also form the basis for an important hazardous waste management control – record keeping and tracking.

Objective:

- To endeavour to minimise adverse effects on the environment and the community arising from the handling, transportation, treatment and final disposal of hazardous waste.

The control of the use of land for the purpose of the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances is a shared function of the regional council and territorial authorities (Resource Management Act 1991, sections 30 and 31). The key involvement of each agency with regard to hazardous wastes is outlined below:

West Coast Regional Council	Territorial local authorities	Ministry for the Environment
• No operational role • Services the WCWMWG • Promote the use of hazardous waste collection facilities • Hazardous waste education and awareness programmes	• Maintain at least one collection site in each district	• Ship hazardous waste out of the region • Out-of-region disposal

Permanent facilities for the collection and temporary storage of domestic quantities of hazardous waste will be established at Hokitika, Greymouth (McLean's landfill) and Westport. The disposal of commercial quantities of hazardous waste is the responsibility of the waste generator. The gating and staffing of all landfills and resource centres mitigates the risk of illegal dumping of hazardous substances.

The Ministry for the Environment is working with regional authorities around New Zealand on the collection and disposal of unwanted agrichemicals. The West Coast local authorities will undertake a hazardous waste collection throughout the region by June 2004.

By December 2005, an integrated and comprehensive national hazardous waste management policy will be in place that covers reduction, transport, treatment and disposal of hazardous wastes to effectively manage risks to people and the environment.

This is a national target. West Coast Regional Council and the three district councils look forward to the introduction of a national hazardous waste management policy and will, where appropriate, aim to be consistent with it.

West Coast local authorities will, in a manner consistent with their statutory functions, be consistent with the national hazardous waste management policy and assist the government in meeting its targets in relation to hazardous waste.

By December 2004, hazardous wastes will be appropriately treated before disposal at licensed facilities, and current recovery and recycling rates will be established for a list of priority hazardous wastes.

Industrial and commercial hazardous waste is not accepted at any landfill or resource centre on the West Coast. The only hazardous wastes disposed to these landfill are small quantities mixed in general refuse collected from households. However, at the uncontrolled landfill sites throughout the region there is no restriction on the disposal of hazardous wastes or any other waste stream.

Currently all domestic hazardous wastes diverted from landfill are stored at temporary storage facilities before being transported to an appropriate out-of-region disposal facility. Large quantities of hazardous waste are not collected under this system and commercial wastes are the responsibility of the producer.

By June 2005 at least one landfill or resource centre in each district will provide a dedicated facility for the collection of non-commercial quantities of hazardous waste.

Recovery and recycling rates for priority hazardous waste will increase 20 percent by December 2012.

This is a national target. The NZWS does not state a baseline to use, and therefore further definition of this target by central government is required. Following this direction the West Coast Regional Council and the three district councils will, in a manner consistent with their statutory functions, endeavour to assist central government in reaching this target.

Following clarification of the basis for the national target for recovery and recycling for priority waste streams, West Coast Regional Council and the three district councils will, in a manner consistent with their statutory functions, endeavour to assist central government in reaching its target by December 2012.

4.5.1 Additional hazardous waste targets for the West Coast

By December 2004 all landfill sites in the West Coast region will be gated and staffed to enforce the policy of non-acceptance of hazardous waste for disposal at landfills.

By June 2004 the West Coast local authorities in conjunction with the Ministry for the Environment Hazardous Waste Management Programme will carry out a regional hazardous waste collection.

A regionally coordinated hazardous waste collection is repeated on an on-going basis, as determined by the WCWMWG based on estimated quantities of hazardous waste in the region.

4.6 Contaminated sites

The West Coast Regional Council has developed a Contaminated Sites Strategy (August 2002). The Strategy adopts the classification and management protocols identified in the Ministry for the Environment Guidelines *Classification and Information Management Protocols for Contaminated Land* (August 2001).

The West Coast Regional Council is responsible for the contaminated sites database including entry and verification of site data, receiving information from district councils, and site assessments and classification. The district councils have access to the database for use in updating or preparing Land Information Memoranda (LIM) and Property Information Memoranda (PIM) on specific properties and provide a key role in the routine transfer of data.

A summary of the status of 'contaminated' sites currently on the West Coast Regional Council database of Sites Associated with Hazardous Substances is set out below in .

Table 1.

Table 1 **Summary of contaminated site information held on WCRC database (as at April 2004)**

Classification categories	**Number of sites**
Category U – Unverified history of hazardous activity or industry	17
Category V – Verified history of hazardous activity or industry	370
Category 1 – Contamination confirmed	11
Category 2 – Contamination acceptable, managed/remediated for <land use>	41
Category 3 – No identified contamination	6
Category E – Entered on register in error	44
Total number of properties on database	**492**

The site classification process for the West Coast region is slightly adapted from the Ministry protocol. Variations include that the database excludes sites with petroleum storage tanks less than 3000 litres and septic tank land disposal sites.

By December 2008, all sites on the Hazardous Activities and Industry List will have been identified and 50 percent will have been subject to a rapid screening system in accordance with Ministry guidelines.

The West Coast Regional Council's contaminated sites database includes all known contaminated sites in the region, with the exception of mining sites. The Council is currently working with Solid Energy in identifying historic mining sites on private land to be included on the contaminated sites database.

However, the Council notes that even with the best efforts it is unrealistic to expect that every site on the Hazardous Activities and Industry List will be identified due to the number of mine sites (and animal dip sites) for which there are few or no records.

To date, one-third of the sites included on the contaminated sites database have been subject to a rapid screening system in accordance with Ministry guidelines. The Council is investigating opportunities to complete this process.

By June 2008, all known sites on the Hazardous Activities and Industry List will have been identified and at least 50 percent will have been subject to a rapid screening system in accordance with Ministry guidelines.

By December 2010, all sites on the Hazardous Activities and Industry List will have been subject to a rapid screening system in accordance with Ministry guidelines, and a remediation programme will have been developed for those that qualify as high risk.

The majority of additional sites to be screened to meet this target will be the mining sites identified by Solid Energy. The West Coast Regional Council will work with Solid Energy to ensure that these sites have been subject to a rapid screening system in accordance with Ministry guidelines.

A programme for the remediation of identified 'high risk' sites will be developed by the West Coast Regional Council together with the district councils, Solid Energy and land owners.

By June 2010, all sites on the Hazardous Activities and Industry List will have been subject to a rapid screening system in accordance with Ministry guidelines.

By December 2010, the West Coast Regional Council will have established a prioritised remediation programme for high risk contaminated sites not already remediated.

By December 2015, all high risk contaminated sites will have been managed or remediated. A timeframe will also have been developed to address the management or remediation of remaining sites.

Once risk screening is complete the West Coast Regional Council will be able to identify the number of 'high risk' contaminated sites in the region. Some of these will be 'orphan sites' where the parties responsible for the contamination no longer exist and there is an inability to pay for site management or remediation. The remediation of these sites will require central government funding assistance.

The West Coast Regional Council will work with the district councils and Solid Energy to prioritise the remediation of orphan sites and to prepare funding applications.

High risk contaminated sites will be managed or remediated by December 2015 where landowner liability exists.
Orphan sites will be managed or remediated based on priority and available funding.

4.7 Organochlorines

Organochlorines are chemicals which contain carbon and chlorine atoms joined together. Harmful organochlorines are those which do not break down easily and which stay in the environment and in humans for a long time. These include:

- Dioxin;
- Industrial chemicals which are toxic in their own right and also contain dioxin, such as polychlorinated biphenyls (PCBs) and pentachlorophenol (PCP); and
- Chlorinated pesticides (e.g. dieldrin, DDT).

All of the above are of concern internationally because of their potential to cause adverse effects on human health and on the environment. A United Nations environmental treaty (Stockholm Persistent Organic Pollutants (POP) Convention) on these toxic chemicals was negotiated in 2001. The objective of the treaty, which New Zealand is a party to, is to protect human health and the environment from persistent organic pollutants.

Landfill fires, a major cause of dioxin emissions in New Zealand, are prohibited under rule 17 of the Regional Air Quality Plan for the West Coast. The proposed National Environmental Standard for Air Quality will ban landfill fires but is not including low temperature burning of wastes.

The burning of domestic rubbish in household incinerators is carried out throughout the West Coast in both rural and residential areas. It is noted that silage wrap does not contain organochlorines.

The West Coast Rural Fire District Board operates a year-round restricted fire season, which means that any fire in the open that is not in a container needs a fire permit. Fire permits include various conditions depending on location and the material proposed to be burnt.

The district councils control back-yard burning in residential areas. Westland District Council permits back-yard burning provided that guidelines are followed and that there is no nuisance effect or fire-ban in place. Buller District Council permits backyard burning in approved incinerators without a fire permit, or in the open provided a fire permit is obtained. Fires are not permitted to create a nuisance or hazard to adjoining property occupants. In Grey District Council, a fire in an approved container does not need a permit, but may still need a discharge to air permit from the regional council. (Hazardous waste or toxic substances likely to produce toxic fumes). Uncontained backyard fires for domestic rubbish require a permit.

The Ministry for the Environment commenced a national Organochlorines Programme in 1995 to characterise background levels of organochlorines in the New Zealand environment and to establish risk-based environmental acceptance criteria for these substances. Nationwide environmental surveys were undertaken in 1996/1997to determine the background concentrations of the target organochlorine substances in terrestrial and aquatic media and in ambient air[5]. The results demonstrated that New Zealand's environment has a relatively low level of organochlorine contamination when compared with other developed countries.

[5] Ministry for the Environment, 1998. *Organochlorines in New Zealand*. Organochlorines Programme, Ministry for the Environment

The organochlorines survey included two West Coast sites – ambient air sampling at an industrial site associated with hazardous substances and water sampling in the Haast River. The sampling results showed some organochlorine contaminants present at the industrial site and no organochlorines in the Haast River.
The Ministry for the Environment's Organochlorines Programme is currently developing standards and guidelines for managing 12 principal organochlorine substances.

By December 2010, New Zealand will have met international obligations under the Stockholm Convention to collect and destroy PCBs and organochlorine pesticide wastes.

This is a national target. The West Coast Regional Council will assist Government in reaching these targets, consistent with its statutory functions.

By December 2020, the average body burdens of dioxins will have been reduced to 10 percent of present day levels.

This is a national target. West Coast Regional Council and the three district councils look forward to the introduction of a national hazardous waste management policy and will, where appropriate, aim to be consistent with it.

4.8 Trade wastes

Trade wastes are generated by businesses, and disposed of through the sewerage system. They include hazardous materials from industrial and manufacturing processes, many of which are treated and then discharged to water or land with other components of general sewage. Under the Resource Management Act, monitoring of trade waste is the responsibility of district councils. This is done through by-laws or the resource consent process.

Trade waste by-laws apply to all industries connected to the system. The by-laws prohibit the discharge of certain materials and set limits on volumes of other wastes. Users who exceed these limits are 'trade waste customers' and require a trade waste consent for the discharge.

Westland District Council
Westland District Council has not yet adopted the New Zealand Standard Model General By-laws. The Westland District Council only has four trade waste customers in Westland (all of which are in Hokitika). Westland Milk Products operates under the ISO 9001 quality management system.

Grey District Council
Grey District Council has adopted the New Zealand Standard for trade waste, but has not yet adopted it as an implemented by-law. Grey District Council will use the New Zealand Standard Model General Trade waste By-laws when adopting trade waste by-laws. The resource consent conditions for the Greymouth Sewerage Sludge Scheme include requirements for trade wastes.

Buller District Council
The Buller District Council intends to introduce by-laws relating to trade waste at the time a new wastewater treatment plant is commissioned in Westport. This will provide the Council with the necessary control to comply with plant operation procedures and resource consent conditions.

By December 2005, all territorial local authorities will have implemented and will be monitoring Model General Trade Waste By-laws based on the New Zealand Standard Model General By-laws, Part 23 - Trade Waste or its equivalent.

Grey District Council has adopted the New Zealand Standard Model General By-laws. All three district councils are working toward the introduction of trade waste by-laws.

Grey District Council will introduce trade waste by-laws by 2006, Westland District Council by December 2005.

By December 2005, all territorial local authorities will ensure that all holders of new or renewed trade waste permits will have in place a recognised waste minimisation and management programme.

There is an opportunity for local authority officers to promote waste minimisation and management on a voluntary basis to trade waste permit and resource consent holders.

The West Coast Regional Council and three district councils will promote waste minimisation and management on a voluntary basis to trade waste permit holders.

4.9 Waste disposal

The NZWS identifies two main issues as being crucial in the area of waste disposal:
- the application of high environmental standards; and
- efficient cost pricing.

Solid wastes

High environmental standards are essential to protect the environment and human health. Inconsistent environmental performance standards can mean wastes are sent to facilities with low performance standards, increasing the risk of environmental damage. The Ministry for the Environment is developing environmental performance guidelines for waste treatment and disposal that may be supported by a National Environmental Standard. Currently, territorial local authorities and regional councils set landfill operating standards through the resource consent process. National standards may provide for greater consistency in practice.

Pricing policies that, as far as practicable, reflect full costs of the management and disposal of waste, are essential to effective waste minimisation and management. Inefficient pricing policies encourage waste flight to facilities that do not account fully for environmental cost.

Per head of population, the West Coast region has more landfills than any other region in New Zealand. This is a direct reflection of the remote location of many small communities, and the need to provide waste management options to these residents. Of greatest concern is that many of these small, rural landfills do not meet national guidelines for landfills.

The district waste management plans outline the status of landfills throughout the region and detail of waste collection services. A summary of this information is set out below.

Grey district
McLean's Landfill is the only operational landfill in the district and is a modern engineered landfill with all required resource consents and discharge permits and that meets Ministry for the Environment standards. The landfill is operated under contract by Works Infrastructure and disposal fees are charged. The potential to use McLean's Landfill as a regional facility is currently being investigated.

Grey district operates a bag collection for most of the district (approximately 80%), with only the extreme outlying areas not having a collection. These areas are serviced by resource centres at Blackball, Moana and Nelson Creek, and a seasonal skip facility at Mitchells (southern side of Lake Brunner).

All disposal sites in Grey district are staffed. User charges for waste disposal to McLean's landfill are $10 per cubic metre, with no charge for materials not deposited in the landfill (including green waste). Due to the real costs of associated with all materials the Council may review this policy in time. There are no disposal charges at any of the resource centres, although staff encourage separation and diversion from landfill.

The Grey District Council funding policy for waste management is that the bag collection service is funded 10% general rate across he district and 90% direct user charges, and costs

for disposal sites are met by 40% general rate and 60% direct user charges. General rates are used to recover the public good component of waste management services.

Buller district
There are currently nine landfills operating in the district, with four (Mawheraiti, Ikamatua, Reefton and Birchfield) expected to close by November 2004. Since June 2003 the Karamea landfill has been staffed and disposal fees charged. Maruia (2025), Charleston (2010) and Inangahua Junction (2010) have resource consents and will be staffed from November 2004. The Council is applying for resource consent to allow the Westport landfill to continue operation until June 2008. During this period negations with Grey District Council to utilise McLean's Landfill as a regional facility will continue and further investigation into the viability of an in-district landfill will be undertaken.

Buller District Council operates a bag collection service from Seddonville to Punakaiki and Reefton. The Council will investigate all options to provide cost effective refuse collection in the district, including the use of wheelie bins, to provide the level of service required by its ratepayers. The Council recognises the need to support any introduction of wheelie bins with an education programme to encourage the removal of green waste from the general waste stream. The type of collection service provided will influence the need for skip services in the four areas where the landfill will be closed. Private waste collectors also provide services throughout the district.

Westland district
There are currently six landfills operating in the district, with most expected to close by the end of 2007-08 and all remaining un-lined sites to close by 2010. The preferred option for replacement of these facilities is to utilise McLean's Landfill as a regional facility, although the option of developing a new in-district facility has not been abandoned.

Westland District Council provides a bag collection for Hokitika, with all other areas serviced by landfills or resource centres. Resource centres are being established as rural landfill sites are closed. There are currently resource centres operating at Ross, Fox and Otira. With the exception of the Denis Road (Haast) landfill, all other landfill sites are controlled and have disposal charges. Access to the Denis Road site will also be controlled by October 2004.

Objective:
- To efficiently and effectively manage the disposal of residual solid waste and to ensure disposal is carried out in a safe and environmentally responsible manner.

The Ministry for the Environment has initiated a project aiming to develop an approach for integrated waste management for small, remote communities that is consistent with the approach set out in the CAE Landfill Guidelines (for landfills), consistent with NZWS objectives with respect to waste minimisation and is appropriate with respect to scale and location. The project will draw on the experiences of West Coast council staff, together with others from around New Zealand considering similar issues. It is expected that the results of this project will be relevant to the more remote parts of the region, including south Westland, and the far northern and northeast areas of the Buller district

The West Coast Waste Management Working Group commissioned the Centre for Advanced Engineering to report on the opportunities for Energy from Waste technologies with particular emphasis on fast pyrolysis as a technically robust approach. The report

'*Energy from waste – Putting resources to productive use*'[6] considered the potential suitability for pyrolysis conversion of the solid waste stream (with recyclables and non-reactives removed) generated on the West Coast. The report highlights that to make an economic case for a pyrolysis waste to energy plant would require the municipal waste from the West Coast region together with other waste resources from within and outside the region. The report recommends that the next step in this investigation is to further investigate methods for waste management (including pyrolysis) and stakeholder support for such initiatives. The development of such programmes needs to await the Government decision on the National Environmental Standard in relation to incineration.

Waste water treatment facilities

Grey District Council
The Grey District Council currently operates waste water treatment schemes for the Greymouth, Moana, Runanga and Karoro communities.

- Moana – consented and complies with resource consents, likely to be subject to development pressure in the short term.
- Runanga – consented and complies with resource consents.
- Karoro – consented (new consents issued March 2004) but does not comply with resource consents, upgrade to commence.
- Greymouth – consented (October 2002) but dos not comply with resource consents, obtained Ministry of Health SWSS approvals and initial contracts let for supply of specialist treatment plant, projected cost $27million including separation of sewer and stormwater works (50% of total costs), works likely to take up to 18 years, target for treatment works completed within 10 years.

The Blackball system is currently at planning stage – SWSS application submitted, feasibility and site selection options underway, resource consent applications commenced. Future schemes required for 'hot spot areas' include (not in priority order) Rapahoe, Dobson, Taylorville, Gladstone, Kaiata and Boddytown.

The development of all schemes is dependent on the communities 'willingness to pay' and the ability of the community to meet the capital costs of the scheme. The SWSS and use of the allocated portion of the West Coast Development Grant will reduce direct user pays charges.

Westland District Council
Westland District Council operates waste water treatment schemes (oxidation ponds) for the Hokitika, Haast, Franz Josef and Fox communities. The level of compliance for these schemes ranges from marginal (Haast) to good (Fox). The rest of the district is served by septic tank systems.

Buller District Council
Buller District Council operates waste water treatment schemes for the Little Wanganui (consented and complies with resource consents), Westport and Reefton (both consented but yet to be constructed) communities. The rest of the district is serviced by septic tank systems. A feasibility report for the Orowaiti scheme is complete and consultation is due to

[6] Cente for Advanced Engineering, January 2004. *Energy from waste – Putting resources to productive use*. Prepared for the West Coast Waste Management Working Group. University of Canterbury.

start. Schemes are also likely for the (in geographical order) Waimangaroa, Granity, Ngakawau Hector and Punakaiki communities.

Tourism

Waste disposal initiatives for the West Coast region need to take account of the increasing numbers of tourists visiting the area, with the majority of tourism impact centred in small communities long distances from key service provisions, particularly Punakaiki, Franz Josef, Fox and Haast. The Westland case study[7] of the impact of tourists on water and waste infrastructure included an overview of solid waste issues, focussing on landfill waste, roadside waste and campervan waste.

Key statements from this report include:

- tourists can produce 2 – 4 tonnes of solid waste per 1000 visitor nights (estimated volume of solid waste generated by tourists in Franz Josef was 680 tonnes / annum in 2002);
- the number of abandoned cars is rising with increasing tourism in the area, with collection and disposal provided at the ratepayers expense;
- education programmes to change the waste management behaviour of tourists will be different from that for permanent residents;
- widespread use is made of lay-bys and rest areas for toilet stops, and many of these sites are less than one kilometre from public toilets;
- issues associated with rogue dumping of campervan waste – health and environmental risks, chemical disposal and introduction of disease; and
- the need to educate all users of campervans (both domestic and international tourists) of the importance of using campervan dump stations.

The West Coast Waste Management Working Group has updated the Ministry of Health 'Campervan Dump Stations' brochure to include all dump stations on the West Coast. The Department of Conservation has been involved in this project. The brochure was published in April 2004 for distribution by the West Coast Regional Council, district councils and Department of Conservation by July 2004.

By December 2003, local authorities will have addressed their funding policy to ensure that full cost recovery can be achieved for all waste treatment and disposal processes.

All three district waste management plans include a 'cost recovery' section with the aim to implement the most appropriate method of cost recovery for collection and disposal services whilst having regard to cost efficiencies and the public good component. However, currently each district council only recovers some of the costs of waste management through a combination of special rate for domestic collection services, refuse bag sales, landfill charges and general rates funding. There are also difficulties with implementing full cost recovery principles that include the tourism waste component.

[7] Cullen, R, Dakers, A, Fairweather, J.R and Simmons, D.G. 2001. *Tourism, Water and Waste in Westland: Implications of increasing demand on infrastructure.* Tourism Recreation Research and Education Centre, Lincoln University, July 2001.

The West Coast Waste Management Working Group will discuss timeframes for developing a regionally consistent funding policy and make recommendations to the Councils by December 2004, for inclusion in 2005 Long Term Council Community Plans

By December 2005, operators of all landfills, cleanfills and wastewater treatment plants will have calculated user charges based on the full costs of providing and operating the facilities and established a programme to phase these charges in over a timeframe acceptable to the local community.

To eliminate instances of 'waste flight' throughout the West Coast region and from outside the region (where individuals will travel to the 'cheapest' available disposal option), it is important that there is a consistent charging policy for all landfills and resource centres.

A key step in implementing this is that all existing and new landfills and resource centres are gated and staffed in order to encourage waste separation and collection of disposal charges.

Buller District Council has proposed to increase charges at Westport landfill from $6/trailer load to $20/load to better reflect the true cost of disposal. The Westland Solid Waste Management Plan includes a proposed implementation programme to increase gate charges that may provide a guide for the region. This is a staged approach of increasing charges over time to work toward full cost pricing at these facilities.

It is assumed that all private cleanfill and landfill operators operate on full cost pricing.

By December 2005 the West Coast Waste Management Working Group will have calculated landfill disposal charges based on the full costs of providing and operating the facilities and established a programme to phase these charges in over a timeframe acceptable to the local community.

By December 2005, all cleanfills will comply with cleanfill disposal guidelines.

There are four consented cleanfills in the west Coast, with a further two cleanfill consent applications currently being processed. A consent is required for cleanfills exceeding 5000m^3 in volume. The Ministry for the Environment cleanfill guidelines are met for all consented cleanfills. Many consented landfills also accept cleanfill and use it for site rehabilitation.

By December 2005, all cleanfills will comply with cleanfill disposal guidelines.

By December 2010, all substandard landfills will be upgraded or closed.

All districts are working towards the closure of all substandard landfills in the West Coast by 2010. Closed sites have resource consent conditions requiring ongoing environmental monitoring and preparation of site management plans and Councils are committed to

discouraging unofficial competition for waste disposal and closing unofficial dump sites as they become known.

By December 2010, all substandard landfills will be upgraded or closed.

By December 2020, all substandard wastewater treatment facilities will be upgraded, closed or replaced with systems that comply with all relevant regional and coastal plans, standards and guidelines.

This target is achievable for the Grey district (Greymouth scheme over 18 years for full separation, and it is unlikely that any other scheme will take as long as Greymouth). The Hokitika system requires significant works – desludging of ponds ($800,000), new ponds ($500,000), tertiary treatment ($800,000) and new outfall ($500,000). Westland district will meet this target in 2007/2008. Buller District Council schemes will also meet this target.

By December 2020, all substandard wastewater treatment facilities will be upgraded, closed or replaced with systems that comply with all relevant regional and coastal plans, standards and guidelines

4.9.1 Additional waste disposal targets for the West Coast

By December 2004 all landfill sites on the West Coast will be gated and staffed.

Local authorities will close unofficial dump sites as they become known.

5. Taking action

This section of the Regional Waste Strategy sets out an action plan for meeting the targets proposed in the previous section, and for addressing the key issues identified for the region.

This symbol indicates each action that is required to achieve the 'West Coast targets'. There is also a cross-reference to the priority waste area and target that it directly relates to.

The priority rankings for each of these actions will be determined by the West Coast Waste Management Working Group, and implemented through the Annual Plan process of each Council. The targets in this section are subject to funding being made available. Each action states the parties responsible for implementing the action and the projected timeframes to achieve the 'West Coast targets' of the Strategy.

Establish a co-ordinated waste minimisation advice and education programme for the West Coast region

The provision of advice and education to the community is an essential element of encouraging a behavioural change. Currently each Council provides education throughout the region individually. To be effective, education and promotion programmes need to be consistent across the region, repetitive and up-to-date to target the most important issues and groups. A regional approach to education, co-ordinated by a Regional waste Minimisation Officer, will provide such consistency and 'economies of scale'.

There are two key audiences for a targeted waste minimisation programme:

- community (including school programmes)
- industry (especially small to medium sized businesses that do not have the resources available in-house)

	Action by	Date
Develop and distribute promotional material to the public on: • reducing the consumption of packaging material • purchasing products that produce less waste and/or contain a recycled content and are recyclable • how to set up a home composting system or worm farm • what materials can be recycled, where to recycle them and when they will be accepted • the adverse effects of fly-dumping in rural areas, forests, waterways and the coast • the range and toxicity of household hazardous waste and on alternative disposal options	WCWMWG and MfE	Dec 2005
Prepare and distribute education material for rural communities on good waste management in rural areas, including hazardous wastes	WCWMWG	Dec 2005
Develop a 'Waste Minimisation' education programme targeted initially at schools, for regional distribution	WCWMWG with community groups	Dec 2005

	Action by	Date
Promote waste audits to businesses and industry by promoting the financial and environmental benefits of implementing cleaner production	WCWMWG & MfE	Dec 2005
Initiate a waste exchange network and recycling directory and distribute amongst business to ensure all materials for which there is a market are reused and/or recycled	WCWMWG	Dec 2005

Link with the following 'West Coast target'

- *Waste minimisation*
- *Organic wastes*
- *Trade wastes*

Establish a programme for the collection of baseline data on waste streams and quantities in the West Coast

The availability of data is necessary in order to set targets and establish policies for waste minimisation and management. The collection of the data over time will allow Councils to report quantitatively on their progress on waste minimisation and management.

	Action by	Date
Each Council to report quantitative assessments of waste streams and quantities in their annual report.	District councils	2005
Introduce operator staffing at all landfills and resource centres and allow waste disposal only when staff are in attendance	District councils	Dec 2004
Use landfill and resource centre operating contracts to establish formal systems for consistent and accurate recording of waste data	District councils	At contract renewal

Link with the following 'West Coast target'

- *Waste minimisation*
- *Organic wastes*
- *Construction and demolition wastes*
- *Waste disposal*

Develop in-house waste minimisation procedures for all facilities and assets and set target reductions

If the local authorities of the West Coast region are promoting waste minimisation initiatives to the community, they must lead by example and show evidence of the initiatives promoted being implemented in practice.

	Action by	Date
Carry out a waste audit of all Council facilities and assets and identify ways to reduce waste. Use the results as a case study for educating other businesses	WCRC District councils	Dec 2006
As far as practicable, adopt a 'green purchasing policy' for all Council activities, including contract arrangements	WCRC District councils	Dec 2006
All garden waste (green waste) is separated from each Council's waste stream	WCRC District councils	Dec 2006

Link with the following 'West Coast target'

- *Waste minimisation*

All landfill sites in the West Coast to operate controlled 'resource centre' facilities that:

- **have a regionally co-ordinated charging policy**
- **provide a dedicated hazardous waste collection and storage facility**
- **encourage the diversion of end-of-life cars, scrap metal, whiteware, hazardous substances, green waste and cleanfill.**

	Action by	Date
District councils to continue investigation and discussion for a regional transport system and regional disposal of solid waste at McLean's landfill	District councils	Ongoing
All landfill sites to be gated and staffed and operated as 'resource centres' to implement the policies of this Strategy	District councils	Dec 2004
Apply consistent landfill disposal charges at all sites based on the full costs of providing and operating the facilities	District councils	Dec 2005
Use landfill disposal charges to encourage the diversion of end-of life cars, scrap metal, whiteware, hazardous substances, green waste and cleanfill from landfill	District councils	Dec 2005
Resource centre operator contracts to include the requirement for consistent and accurate monitoring and reporting of the volumes and types of wastes both disposed to landfill and diverted from landfill	District Councils	At contract renewal
District councils to adopt a policy of non-acceptance of hazardous waste for disposal to landfill	District councils	June 2004
At least one landfill or resource centre in each district will provide a dedicated facility for the collection of non-commercial quantities of hazardous waste	District councils	June 2005

Investigate methods available for the safe disposal of treated timber, construction and demolition waste	WCWMWG & MfE	Dec 2005

Link with the following 'West Coast target'

- *Waste minimisation*
- *Organic wastes*
- *Construction and demolition wastes*
- *Hazardous wastes*
- *Waste disposal*

Investigate opportunities available for the beneficial use of green waste diverted from landfill

The diversion of green waste from landfill will result in a significant reduction in the volume of waste disposed to landfill. Although there is currently some separation of green waste at source, this could be extended as a result of a beneficial use for the diverted waste. Community education to encourage source separation and use of home composting and worm farms is addressed in the advice and education section.

	Action by	Date
Establish baseline data for the volume of green waste available for beneficial use	District councils	Dec 2005
Undertake a scoping project of the West Coast region to determine current use of diverted green waste	WCWMWG	Dec 2005

Link with the following 'West Coast target'

- *Waste minimisation*
- *Organic wastes*
- *Waste disposal*

Investigate options for future waste disposal options for the West Coast region

	Action by	Date
Participate in the Ministry for the Environment investigation of options for remote, low volume disposal sites	District councils	July 2004
Undertake a feasibility study of pyrolysis as a waste disposal option for the West Coast if this is deemed a realistic option	WCWMWG	June 2005

Provide education and encourage waste minimisation practices to tourists and tourism operators on the West Coast

There is a need to support New Zealand's 'Clean and Green' international reputation with good waste minimisation and management practices in the 'remote wilderness areas'. The involvement of all service providers and tourism agencies is required to achieve a comprehensive understanding of the issues and provide solutions.

	Action by	Date
Complete the campervan dump stations on the West Coast brochure and make available to campervan users	WCWMWG & DOC	July 2004
Work with the Department of Conservation and tourism agencies to investigate opportunities to develop systems that collectively deal with the waste management issues, including service provision, charges etc	WCWMWG & DOC	Dec 2005

Link with the following 'West Coast target'

- *Waste minimisation*
- *Construction and demolition*
- *Waste disposal*

Contaminated sites management

These actions are from the West Coast Regional Council Contaminated Sites Management Strategy.

	Action by	Date
The West Coast Regional Council will update and maintain a database of Sites Associated with Hazardous Substance and provide a data update service to the district councils.	WCRC	July 2004
The West Coast Regional Council will continue to work with Solid Energy to add coal mine sites to the database of Sites Associated with Hazardous Substances.	WCRC	July 2004
The West Coast Regional Council will regulate all discharges from obviously high-risk sites.	WCRC	July 2004
The West Coast Regional Council will prepare and distribute information pamphlets on buying and selling properties that might be contaminated.	WCRC	July 2004
The West Coast Regional Council will work with the three district councils to prioritise sites for investigations and orphan site fund applications.	WCRC, District councils	Ongoing

The West Coast Regional Council and the three district councils will provide information and advice, as required, on the safe and effective management of sites associated with hazardous substances.	WCRC, District councils	July 2004

Link with the following 'West Coast target'

- *Contaminated sites*

Hazardous wastes

	Action by	Date
Carry out a regional hazardous waste collection. Use opportunity to distribute education material for future disposal options. Carry out regional collections in the future if necessary.	WCRC, District councils	May 2004
Establish a permanent, free collection site in the main waste collection area in each district, for non-commercial quantities of hazardous waste and promote the use of these facilities.	WCRC, District councils	July 2004
Encourage Ministry for the Environment to work with suppliers of hazardous waste (e.g. agrichemicals) to encourage extended producer responsibility programmes	WCWMWG	ASAP

Link with the following 'West Coast target'

- *Hazardous wastes*

Appendix I

Comparative matrix –
NZWS and Regional Waste Strategy targets

Waste minimisation

NZWS target	Regional target	Comment
Local authorities will report their progress on waste minimisation and management for their annual report in 2001-02 and quantitatively on an annual basis from then onwards.	Local authorities in the West Coast will report quantitatively on waste minimisation and management in their annual reports from 2003/2004 onwards.	Aligns target with preparation of Regional Waste Strategy
By December 2005, all regional councils will ensure that new or renewed industrial resource consents include a recognised waste minimisation and management programme and will report on the percentage of all consents under their jurisdiction that have such a clause.	As of June 2004, West Coast Regional Council will, where the purpose of the consent makes it appropriate and legally possible, require by way of a condition on a new or renewed resource consent to include a waste minimisation and management programme. West Coast Regional Council will report on the percentage of all consents under their jurisdiction that have such a condition.	NZWS target ultra vires. Target adapted to encourage waste minimisation and management programmes for consent applications. Removed reference to 'recognised' programme.
By December 2005, at least 10 major businesses will be participating alongside central and local government in developing and promoting waste minimisation programmes within their sector.	This is a national target.	
Ninety-five percent of the population will have access to community recycling facilities by December 2005.	Where there is a viable market for a recyclable product, ninety-five percent of the West Coast population will have access to community recycling facilities for these materials by December 2005. **Definition of 'access'** *"Access is defined for the purpose of this Strategy as being no more than a 60 minute round trip by car away from a transfer station at which during operating hours the public can drop off recyclables, including glass, paper, cans, tins and plastics, free of charge."*	Have clarified 'access' as appropriate to the West Coast.
By December 2005, territorial local authorities will ensure that building regulations incorporate reference to space allocation for appropriate recycling facilities in multi-unit residential and commercial buildings.	The district councils will actively encourage designers to include space for recycling facilities as part of the resource consent application.	We don't write the building regulations.
By December 2005, all councils will ensure that procedures for waste minimisation have been addressed for all facilities and assets they manage and will have set target reductions based on public health, environmental and economic factors.	By December 2006 West Coast Regional Council and the three district councils will have investigated opportunities for implementing waste minimisation programmes and ensure procedures have been addressed for the facilities and assets they manage.	Staged approach to meeting NZWS target.

NZWS target	Regional target	Comment
By December 2010, all regional councils will ensure that at least 25 percent of all existing industrial resource consent holders have in place a recognised waste minimisation and management programme.	West Coast Regional Council will encourage the adoption of waste minimisation and management programmes and endeavour for at least 25% of all industrial operations to have addressed waste minimisation and management by December 2010. This may be done through informal means if there are no legal processes that allow this.	Not all industrial operations require a resource consent & those with consents are not necessarily big waste producers. WCRC will encourage all industries to adopt such programmes.

Organic wastes

NZWS target	Regional target	Comment
By December 2003, all territorial local authorities will have instituted a measurement programme to identify existing organic waste quantities, and set local targets for diversion from disposal.	By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled.	Need to have baseline data before setting targets.
By December 2005, 60 percent of garden wastes will be diverted from landfill and beneficially used, and by December 2010, the diversion of garden waste from landfill to beneficial use will have exceeded 95 percent.	By December 2006 all garden waste on the West Coast will be separated from the waste stream. The local authorities in the West Coast will continue to promote beneficial uses of garden wastes.	Establish best use options for promotion in the West Coast. 75% is a more realistic diversion target for the West Coast.
By December 2007, a clear quantitative understanding of other organic waste streams (such as kitchen wastes) will have been achieved through the measurement programme established by December 2003.	By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled.	Need to have baseline data before setting diversion targets. Work with hospitality industry to identify alternatives.
By December 2007, more than 95 percent of sewage sludge currently disposed of to landfill will be composted, beneficially used or appropriately treated to minimise the production of methane and leachate.	By December 2007, more than 95 percent of sewage sludge currently disposed of to landfill will be composted, beneficially used or appropriately treated to minimise the production of methane and leachate.	Very little sewage sludge at present.
By December 2010, the diversion of commercial organic wastes from landfill to beneficial use will have exceeded 95 percent.	By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on organic waste quantities being landfilled, including sources of commercial organic wastes. The West Coast local authorities will work with commercial businesses to set targets for the diversion of organic wastes from landfill.	Need to have baseline data before setting targets.

Special wastes

NZWS target	Regional target	Comment
By December 2005, businesses in at least eight different sectors will have introduced extended producer responsibility pilot programmes for the collection and reuse, recycling, or appropriate treatment and disposal of at least eight categories of special wastes.	This is a national target.	West Coast local authorities will support national business or government sector initiatives to achieve this target.

Construction and demolition wastes

NZWS target	Regional target	Comment
By December 2005 all territorial local authorities will have instituted a measurement programme to identify existing construction and demolition waste quantities and set local targets for diversion from landfills.	By December 2004 the West Coast Waste Management Working Group will recommend to Councils a preferred programme for the collection of baseline data on construction and demolition waste quantities being landfilled. By December 2005 all territorial local authorities will have set targets for the diversion of construction and demolition waste from disposal.	Need to have baseline data before setting targets.
By December 2008, there will have been a reduction of construction and demolition waste to landfills of 50 percent of December 2005 levels measured by weight.	Territorial local authorities will set targets for the diversion of construction and demolition waste from landfill disposal once baseline data has been collected. By December 2008, 95 percent of cleanfill will have been diverted from landfills (excluding where cleanfill is used as cover for site restoration).	Establish targets once have baseline data. Additional target specific to cleanfill material. Good rates of diversion (cleanfill sites) and reuse (site re-instatement).

Hazardous wastes

NZWS target	Regional target	Comment
By December 2005, an integrated and comprehensive national hazardous waste management policy will be in place that covers reduction, transport, treatment and disposal of hazardous wastes to effectively manage risks to people and the environment.	West Coast local authorities will, in a manner consistent with their statutory functions, be consistent with the national hazardous waste management policy and assist the government in meeting its targets in relation to hazardous waste.	National target.
By December 2004, hazardous wastes will be appropriately treated before disposal at licensed facilities, and current recovery and recycling rates will be established for a list of priority hazardous wastes.	By June 2005 at least one landfill or transfer station in each district will provide a dedicated facility for the collection of non-commercial quantities of hazardous waste.	Extension of target date to provide facility in each district.

NZWS target	Regional target	Comment
Recovery and recycling rates for priority hazardous waste will increase 20 percent by December 2012.	Need clarification of the basis for measuring the national target for recovery and recycling for priority hazardous waste.	National target.
Additional targets	By December 2004 all landfill sites in the West Coast region will be gated and staffed to enforce the policy of non-acceptance of hazardous waste at landfills. By June 2004 the West Coast local authorities in conjunction with the Ministry for the Environment Hazardous Waste Management Programme will carry out a regional hazardous waste collection A regionally coordinated hazardous waste collection is repeated on an on-going basis, as determined by the West Coast Waste Management Working Group based on estimated quantities of hazardous waste in the region.	

Contaminated sites

NZWS target	Regional target	Comment
By December 2008, all sites on the Hazardous Activities and Industry List will have been identified and 50 percent will have been subject to a rapid screening system in accordance with Ministry guidelines.	By June 2008, all known sites on the Hazardous Activities and Industry List will have been identified and at least 50 percent will have been subject to a rapid screening system in accordance with Ministry guidelines.	
By December 2010, all sites on the Hazardous Activities and Industry List will have been subject to a rapid screening system in accordance with Ministry guidelines, and a remediation programme will have been developed for those that qualify as high risk.	By June 2010, all sites on the Hazardous Activities and Industry List will have been subject to a rapid screening system in accordance with Ministry guidelines. By December 2010, the West Coast Regional Council will have established a prioritised remediation programme for high risk contaminated sites.	
By December 2015, all high risk contaminated sites will have been managed or remediated. A timeframe will also have been developed to address the management or remediation of remaining sites.	High risk contaminated sites will be managed or remediated by December 2015 where landowner liability exists. Orphan sites will be managed or remediated based on priority and available funding.	Target amended to reflect cost issues where there is no landowner liability.

Organochlorines

NZWS target	Regional target	Comment
By December 2010, New Zealand will have met international obligations under the Stockholm Convention to collect and destroy PCBs and organochlorine pesticide wastes.	This is a national target. The West Coast Regional Council will assist Government in reaching these targets, consistent with its statutory functions.	National target.
By December 2020, the average body burdens of dioxins will have been reduced to 10 percent of present day levels.	This is a national target. West Coast Regional Council and the three district councils look forward to the introduction of a national hazardous waste management policy and will, where appropriate, aim to be consistent with it.	National target.

Trade wastes

NZWS target	Regional target	Comment
By December 2005, all territorial local authorities will have implemented and will be monitoring Model General Trade Waste By-laws based on the New Zealand Standard Model General By-laws, Part 23 - Trade Waste or its equivalent.	Grey District Council will introduce trade waste by-laws by June 2006, Westland District Council by 2005.	District Councils are working toward the New Zealand Standard Model General Trade Waste By-laws.
By December 2005, all territorial local authorities will ensure that all holders of new or renewed trade waste permits will have in place a recognised waste minimisation and management programme.	The West Coast Regional Council and three district councils will promote waste minimisation and management on a voluntary basis to trade waste permit holders.	

Waste disposal

NZWS target	Regional target	Comment
By December 2003, local authorities will have addressed their funding policy to ensure that full cost recovery can be achieved for all waste treatment and disposal processes.	The West Coast Waste Management Working Group will discuss timeframes for developing a regionally consistent funding policy	Aligns target with preparation of Regional waste Strategy. Important for the WCWMWG to develop regionally consistent policy.
By December 2005, operators of all landfills, cleanfills and wastewater treatment plants will have calculated user charges based on the full costs of providing and operating the facilities and established a programme to phase these charges in over a timeframe acceptable to the local community.	By December 2005 the West Coast Waste Management Working Group will have calculated landfill disposal charges based on the full costs of providing and operating the facilities and established a programme to phase these charges in over a timeframe acceptable to the local community.	WCWMWG calculates charges to ensure regional consistency.

NZWS target	Regional target	Comment
By December 2005, all cleanfills will comply with cleanfill disposal guidelines.	By December 2005, all cleanfills will comply with cleanfill disposal guidelines.	Consistent
By December 2010, all substandard landfills will be upgraded or closed.	By December 2010, all substandard landfills will be upgraded or closed.	Consistent
By December 2020, all substandard wastewater treatment facilities will be upgraded, closed or replaced with systems that comply with all relevant regional and coastal plans, standards and guidelines.	By December 2020, all substandard wastewater treatment facilities will be upgraded, closed or replaced with systems that comply with all relevant regional and coastal plans, standards and guidelines.	Consistent
Additional targets	By December 2004 all landfill sites on the West Coast will be gated and staffed. Local authorities will close unofficial dump sites as they become known.	Essential component to meeting diversion targets and implementing charges.