



Chapter 13

Solid and
hazardous waste

Solid and hazardous waste

SUMMARY

Overview

The volume of waste generated in Canterbury is showing a steady increase, in both total volume measurements and on a per capita basis. Although there is good access to recycling throughout the region, diverting increasing quantities of waste away from landfills, some studies have shown that at least half of the waste sent to landfill could have been recycled or composted. Local and regional initiatives for the safe disposal of hazardous waste are reducing the potential risks from storage of these items.

Resources

In Canterbury, as throughout the developed world, the issue of waste is inextricably linked to the nature of consumer-driven society. Modern societies tend to generate large quantities of waste, notably from packaging, disposable products and the ongoing changes that make functional objects obsolete very quickly.

As a by-product of production and consumption patterns, waste amounts are influenced by the quantities of goods produced and consumed. As economic activity and wealth increase, so too does waste. In addition, the continual growth of markets for new products depends partly on the continuous disposal of old things.

Changes in this cycle can be achieved through efficiencies and attitudinal changes which can contribute to an offset in waste increases associated with production and consumption.

Processes

Waste has been identified as a major issue for New Zealand. At both national and local levels, a range of policies and plans promoting sustainability and waste minimisation have been introduced over recent years. Despite these initiatives, however, the increase in waste generation in Canterbury remains in similar proportion to its economic growth.

Until recently, it has been difficult to accurately quantify the total amount of waste generated and disposed of in the Canterbury region. Current monitoring indicates continuing growth in waste volumes. Research into social and behavioural aspects of waste has identified a variety of barriers to changes in attitudes and behaviours related to solid waste in Christchurch.

Outcomes

The total measured volume of waste generated in Canterbury is increasing. In the period from 2001/02 to 2005/06, the total measured waste per person per year increased by 15%. From 2001/02 to 2004/05 the volume of residual waste disposed of to landfill per person per year in Canterbury increased by 12%. Additionally, it was found that more than half of all the waste disposed of to landfill in a rural district and an urban centre in 2003/04 was potentially recyclable or compostable.

While total waste volumes are increasing, the percentage of waste diverted away from municipal landfills in Canterbury is also increasing, and overall waste management in the region has significantly improved over the last few years. Access to kerbside recycling in the Canterbury region is good.

Responses

Environment Canterbury is addressing these issues through the following activities:

- Providing regional information on waste volumes
- Assessing the progress of Canterbury's territorial authorities towards the targets in the New Zealand Waste Strategy
- Funding a network of waste exchanges in the region
- Developing, updating and implementing the Canterbury Hazardous Waste Management Strategy
- Installing and upgrading domestic hazardous waste drop-off points
- Co-ordinating a paint exchange pilot in Ashburton
- Establishing and promoting used oil drop-off facilities
- Co-ordinating a Canterbury targeted agrichemical collection
- Providing a 24-hour Pollution Hotline service

Key trends

- Waste sent to landfill has been increasing steadily since 2002
- The amount of hazardous waste collected in the region has increased
- Large quantities of waste disposed to landfill is potentially recyclable or compostable, despite increases in the collection of recyclables
- Total measured waste is increasing
- The number of landfills in Canterbury decreased from 65 in 1996 to 3 by 2005
- Access to kerbside recycling in Canterbury is improving

Key indicators

- Amount of total measured waste
- Composition of waste to landfill
- Amount diverted from municipal landfill and amount recycled
- Number and location of, and facilities available at, landfills, resource recovery parks and transfer stations
- Access to kerbside recycling
- Number of districts that have completed their agrichemical collection
- Amount of oil collected at used oil drop off points

THE IMPORTANCE OF MANAGING SOLID AND HAZARDOUS WASTE

Solid waste

Waste is anything that is disposed of after people decide that they have no further use for it. Solid waste is generated from human consumption and activities related to the construction, operation, maintenance and renewal of human settlements. It comprises a mixture of many different materials from residential and industrial sources, including organic, paper, glass, metal, construction and demolition materials, as well as potentially hazardous substances.

The management of solid waste is a significant issue. Most solid waste in Canterbury is disposed of to authorised landfills. However, some solid waste ends up as litter, is dumped illegally – on river beds, for example – or goes to unauthorised landfills such as farm pits which do not meet regional plan conditions. The disposal of increasing quantities of solid waste can cause a number of direct pressures on the environment through, for example, the production of leachate, greenhouse gases, reduction in landfill space, and litter.

Aside from the direct environmental impacts associated with the management of waste, excessive waste also represents an enormous loss of resources in the form of materials and energy. The total quantity of waste generated can be considered as an indicator of the inefficiency of society. For many wastes, the materials disposed of represent what is left over after a long series of steps including extraction and processing of raw material, manufacture of products, transportation of materials and products to markets, use by consumers and waste management.

Excessive waste, thus, represents a substantial loss of resources. This can impact on the local environment through direct and indirect effects on air, land and water quality, and on the global environment through increased greenhouse gas emissions. Different wastes and waste management options have varying climate change implications owing to their energy consumption, emissions of greenhouse gas (carbon dioxide, methane etc) and potential for carbon sequestration (USEPA, 1998).

Hazardous waste

Hazardous wastes are wastes that exhibit hazardous properties such as corrosiveness, explosiveness, flammability, toxicity, ecotoxicity or capacity to oxidise. The Ministry for the Environment's working definition of hazardous waste¹ is:

Any waste² 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 Organisms 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

Examples of potentially hazardous waste include:

- used oil
- electroplating sludge
- unwanted agricultural chemicals
- used solvents and cleaning fluids
- used medical instruments

There is currently no integrated statutory framework covering the management of hazardous waste in New Zealand. Territorial authorities and regional councils have functions and powers to enforce legislation relevant to the management of hazardous waste.

Most hazardous wastes in Canterbury are treated and disposed of within the region. Some are transported out of the region for treatment or disposal. For example, some agrichemicals are treated overseas, while the majority of waste oil collected is transported to Westport and used as an alternative fuel in the production of cement.

The following Table 13.1 outlines the environmental results anticipated by the community.

¹www.mfe.govt.nz

²Waste is defined as any material, whether it is liquid, solid or gas, that is unwanted and unvalued (defined by the W-Code) and discarded or discharged (defined by the D/R-Code) by its holder. In the context of defining waste, 'unwanted and unvalued' relates, but is not limited to, any material from the categories listed in the W-Code (www.mfe.govt.nz).



Table 13.1 Anticipated environmental results for solid and hazardous waste in Canterbury

Reference	Anticipated Environmental Outcomes
The Long Term Council Community Plan (LTCCP) 2006-2016	
Waste, hazardous substances and contaminated sites	<ul style="list-style-type: none"> • Environment, in general, is to be looked after • Business and farming activities do not harm the environment
The Regional Policy Statement 1998	
Chapter 18.4 (1) Environmental results anticipated	<ul style="list-style-type: none"> • Reduced adverse effects of solid and hazardous wastes on the environment
Chapter 18.4 (2) Environmental results anticipated	<ul style="list-style-type: none"> • Better utilisation of existing solid and hazardous waste management facilities
Chapter 18.4 (3) Environmental results anticipated	<ul style="list-style-type: none"> • Reductions in the amounts of solid and hazardous wastes produced and requiring disposal
Proposed Natural Resources Regional Plan 2004	
Environmental results anticipated WQL3(b)	<ul style="list-style-type: none"> • There are no new discharges to a river or lake in the area covered by this chapter, of untreated human sewage, animal effluent from an effluent collection system, or solid or hazardous waste
Environmental results anticipated WQL6(e)	<ul style="list-style-type: none"> • There are no new discharges directly to groundwater from industrial or trade processes, hazardous substances or hazardous wastes, untreated human sewage effluent or animal effluent from a collection system

RESOURCES

The factors underlying waste generation are complex and connected to other issues that shape contemporary New Zealand society (PCE, 2004). Waste must be seen not simply as an environmental issue, but in the context of a variety of cultural, social and economic factors. Waste is a symptom of much larger systems and so, when dealing with the problem of waste, it is important to examine the underlying causes of the problem and not simply look at the waste itself.

To get to the bottom of waste issues, consumption needs to be addressed (MfE, 2002). To a large extent, societies in the developed world can be regarded as consumer driven. Purchases are often made to meet perceived social pressures and expectations, rather than purely to satisfy basic well-beings. Advertising is central to the creation of these wants. To illustrate the power of advertising, the Parliamentary Commissioner for the Environment provided the example of an Auckland graphic designer who developed a billboard campaign in 1999 for a product that was literally nothing. The designer used 27 billboards that included a picture of a woman's face and the caption "Nothing™: what you've been looking for". More than one third of Aucklanders recalled viewing the billboards. Some people even rang the owners of the billboards to ask where they could buy Nothing™ (PCE, 2004).

Consumer-driven societies tend to create large amounts of waste. Waste is created by packaging, disposable products and the ongoing changes that make functional objects obsolete very quickly. Planned

obsolescence and lack of support by producers and suppliers have also led to some products having a short lifespan. When repair of the product is deemed not economical, the consumer will often throw it out and replace it with a newer model. The continual growth of markets for new products depends partly on the continuous disposal of old things (PCE, 2004).

The majority of waste is in fact created before people buy things. Vast amounts of material and energy are used to produce goods that will eventually be dumped. In addition, more materials and large amounts of energy are often required to recycle waste into reusable forms. Reducing waste at the outset would make the greatest gains for waste minimisation.

As waste is basically a by-product of production and consumption patterns, waste amounts are influenced by the quantities of goods produced and consumed (PCE, 2004). An increase in production and consumption is, therefore, likely to lead to an increase in waste generated. As the wealth of the population increases people can afford more consumer goods and can afford to buy new items rather than repair old ones. The New Zealand Waste Strategy notes "the amount of waste we produce is directly linked to how many goods and services we consume – the greater our wealth, the more we waste" (MfE, 2002). However, this is not inevitable; efficiencies and attitudinal changes can offset waste increases associated with production and consumption.

PROCESSES

Waste is a significant issue for New Zealand. Currently, the size of New Zealand's ecological footprint per person is very large – calculated to be more than 25% greater than those of Germany, the United Kingdom, the Netherlands or Japan. If all people on Earth used resources at the same rate as New Zealanders, another three planets would be needed to sustain the population (PCE, 2004).

New Zealand's consumption each year has been rising steadily since 1998 (PCE, 2004). As discussed, the New Zealand Waste Strategy states that the greater our wealth, the more we waste. As technologies and lifestyles have changed, a 'throwaway' society has developed, with an increasing trend towards disposability (PCE, 2004).

Despite the development of policies and plans promoting sustainability and waste minimisation by national and local governments, the increase in waste generation in Canterbury is in similar proportion to its economic growth. A 25% increase in Gross Domestic Product (GDP)³ between 1 March 1998 and 28 February 2005 has been accompanied by a 27% increase in total measured waste⁴ between 1 July 1998 and 30 June 2005 (Environment Canterbury, 2006d). In recent years, Canterbury has made good progress in improving waste disposal practices but little in reducing waste generated.

Until recently, it has been difficult to accurately quantify the total amount of waste generated and disposed of in the Canterbury region. This was mainly because many councils did not routinely measure the amount of waste going to landfill. This lack of historical data has made it difficult to gather information and set targets and baselines. Although many Canterbury territorial authorities have adopted the New Zealand Waste Strategy there are few benchmarks against which progress in meeting targets can be assessed.

The vision for a sustainable future, as expressed in the New Zealand Waste Strategy, is one in which New Zealand society "values its environment, and resources". In this envisioned society, "people ... would use all resources efficiently ... They would no longer regard waste as inevitable, or see it as someone else's problem" (MfE, 2002). However, studies by the Christchurch City Council indicate that this will be difficult to achieve. A lack of accountability and a tendency to take the easiest path are just some of the barriers to changes in attitudes and behaviors that research has identified (CCC, 2004).

³GDP is expressed at 1995/96 prices. Source: Infometrics New Zealand

⁴Total measured waste includes residual waste, hazardous waste, recyclables, reuse stores, organics and hardfill waste. It excludes Timaru's hardfill waste, cleanfill waste and data for Waitaki district.

OUTCOMES

Total measured waste

Environment Canterbury collects waste data from the Canterbury territorial authorities to enable reporting on waste quantities and waste management systems in the region.

Table 13.2 shows the amount of measured waste recorded in Canterbury in each financial year from 1998 to 2006 and includes waste data from all territorial authorities in the Canterbury region with the exception of the Waitaki District Council⁸.

The main trends that can be seen in this table are:

- Residual waste to landfill has been steadily increasing since 2001/02
- Hazardous waste collected is increasing
- Recyclables collected are increasing
- Diversion by reuse stores is increasing
- Organics collected have fluctuated but appear to be increasing overall
- Hardfill waste appears to be quite variable
- Total measured waste is increasing
- Cleanfill waste has increased, although this may be a consequence of better data collection from Christchurch city's cleanfills due to the implementation of the Christchurch Cleanfill Bylaw from 1 March 2004

It is not only the total amount of waste generated that is increasing but also the amount of waste generated per person per year. In Canterbury, this has increased by more than 15% between 2001/02 and 2005/06. Residual waste disposed of to landfill per person per year also increased, by more than 12% from 2001/02 to 2005/06.

Table 13.2 Total tonnes of measured waste recorded in Canterbury in each financial year

WASTE COMPONENT (TONNES) ⁵	FINANCIAL YEAR							
	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Residual Waste	283,000	294,000	282,000	286,000	291,000	329,000	343,000	354,000
Hazardous Waste	5	66	66	90	139	218	298	619
Recyclables	13,000	15,000	17,000	19,000	22,000	29,000	34,000	45,000
Reuse stores	0	1000	3000	5000	7000	8000	10,000	3000
Organics	34,000	38,000	34,000	38,000	43,000	37,000	40,000	44,000
Hardfill	17,000	15,000	14,000	16,000	10,000	12,000	12,000	12,000
Total Measured Waste ⁶	346,000	364,000	351,000	364,000	373,000	415,000	439,000	459,000
Cleanfill ⁷	31,000	28,000	26,000	62,000	45,000	373,000	827,000	649,000
CONTRIBUTING POPULATION	427,000	449,000	451,000	480,000	486,000	508,000	516,000	533,000

⁵Figures are rounded to the nearest thousand where appropriate.

⁶Timaru district's hardfill amounts are not included in the total measured waste figure. They are included in the cleanfill figure. Hardfill at Redruth landfill is used as engineering material; some is disposed of but more than 90% is used for engineering or as fill material.

⁷The total measured waste figure does not include cleanfill waste. It has been excluded as the amount of cleanfill recorded during the 2003/04 and the 2004/05 financial years was large and, if included, would skew the total measured waste relative to other years. This increase from previous years is owing to a significant improvement in the collection of data from the cleanfills, within Christchurch city. This improvement was brought about by the introduction of the Christchurch Cleanfill Bylaw on 1 March 2004. The Bylaw requires the gathering of basic data on the quantities and origin of all cleanfill materials. Prior to 1 March 2004 accurate records were not maintained and this would still be the case for the cleanfills operating outside the Christchurch City Council boundary. Therefore, the true amount of cleanfill disposed of within Canterbury is yet to be determined.

⁸Waste data for Waitaki district were collected but are not included. It is difficult to separate the waste that is disposed of in the Canterbury part of the district from the Otago part. As approximately 90% of Waitaki's population lives in the Otago region, district data were excluded to avoid over-reporting the waste disposed of in the Canterbury region.

Composition of waste to landfill

The composition of waste to landfill varies between urban centres and rural districts. This information is incomplete for the Canterbury region as not all territorial authorities collect waste composition data and some collect it only once every few years. Information on the composition of waste to landfill is available for Christchurch city (urban) and the Waimakariri district (rural) for the 2003/04 financial year. This information allows a comparison between the composition of waste to landfill of a major urban centre and a smaller rural district.

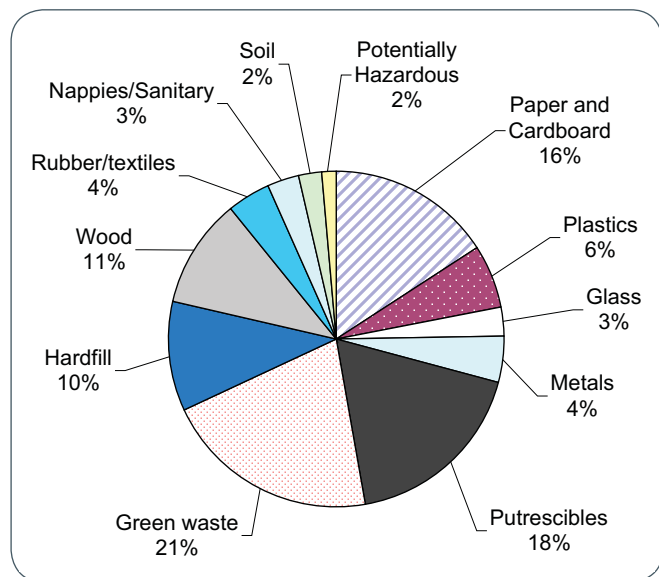


Figure 13.1 Composition of residual waste to landfill in a rural district (Waimakariri), 2003/04

Figure 13.1 shows that the three largest components of the residual waste stream in the Waimakariri district are green waste, putrescibles, and paper and cardboard, respectively. Green waste and putrescibles combined comprise 39% of the waste stream.

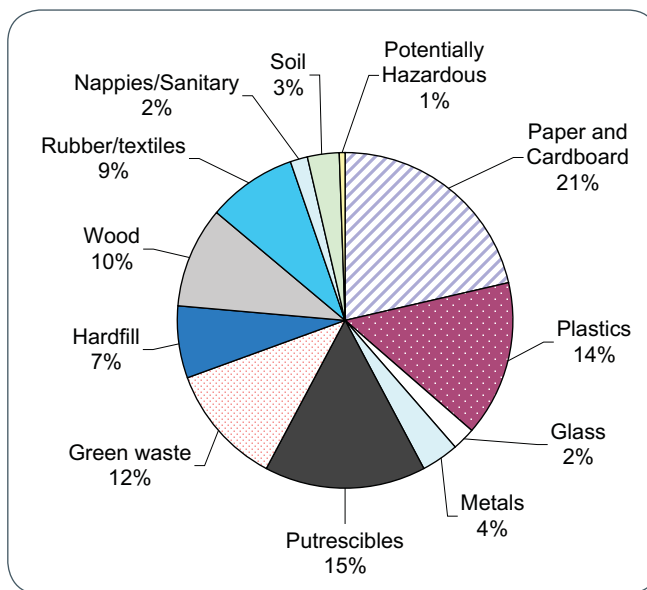


Figure 13.2 Composition of residual waste to landfill in an urban centre (Christchurch city), 2003/04

Figure 13.2 shows that the three largest components of the residual waste stream in Christchurch city are paper and cardboard, putrescibles and plastics, respectively. Green waste and putrescibles combined comprise 27% of the residual waste stream.

Figures 13.1 and 13.2 show the following waste composition trends:

- Paper and cardboard comprise a larger component of the waste to landfill in an urban centre than in a rural district
- Plastics comprise a larger component of waste to landfill in an urban centre than in rural district
- Over a quarter of the waste sent to landfill in Christchurch city, and a third in Waimakariri district, could potentially be composted
- More than half of all the waste disposed to landfill in Christchurch city and in Waimakariri district was potentially recyclable or compostable, despite the availability of kerbside recycling in both districts

Amount diverted from municipal landfill and amount recycled

Waste data also show that the percentage of waste diverted away from municipal landfills in Canterbury is increasing. Some of the increase in diversion is due to an increase in recycling. The proportional increase is reflected in increases in total quantities and per capita amounts, the latter up from 29 kg per person per year in 1998/99, to 84 kg per person per year in 2005/06. However, this varies by district with some districts showing a decrease in the percentage of waste diverted between the 2003/04 and 2004/05 financial years.

Access to waste management services

Waste management in the Canterbury region has significantly changed over the last few years. There has been a decrease in the number of small local landfills, and sub regional landfills have been introduced, serviced by transfer stations and resource recovery parks, many of which have recycling facilities.

The number of landfills in Canterbury decreased from 65 small local landfills in June 1996 to 15 landfills in 1998/99. With the closure of the Methven landfill at the beginning of 2005, there are now three (Kate Valley, Kaikoura and Redruth).

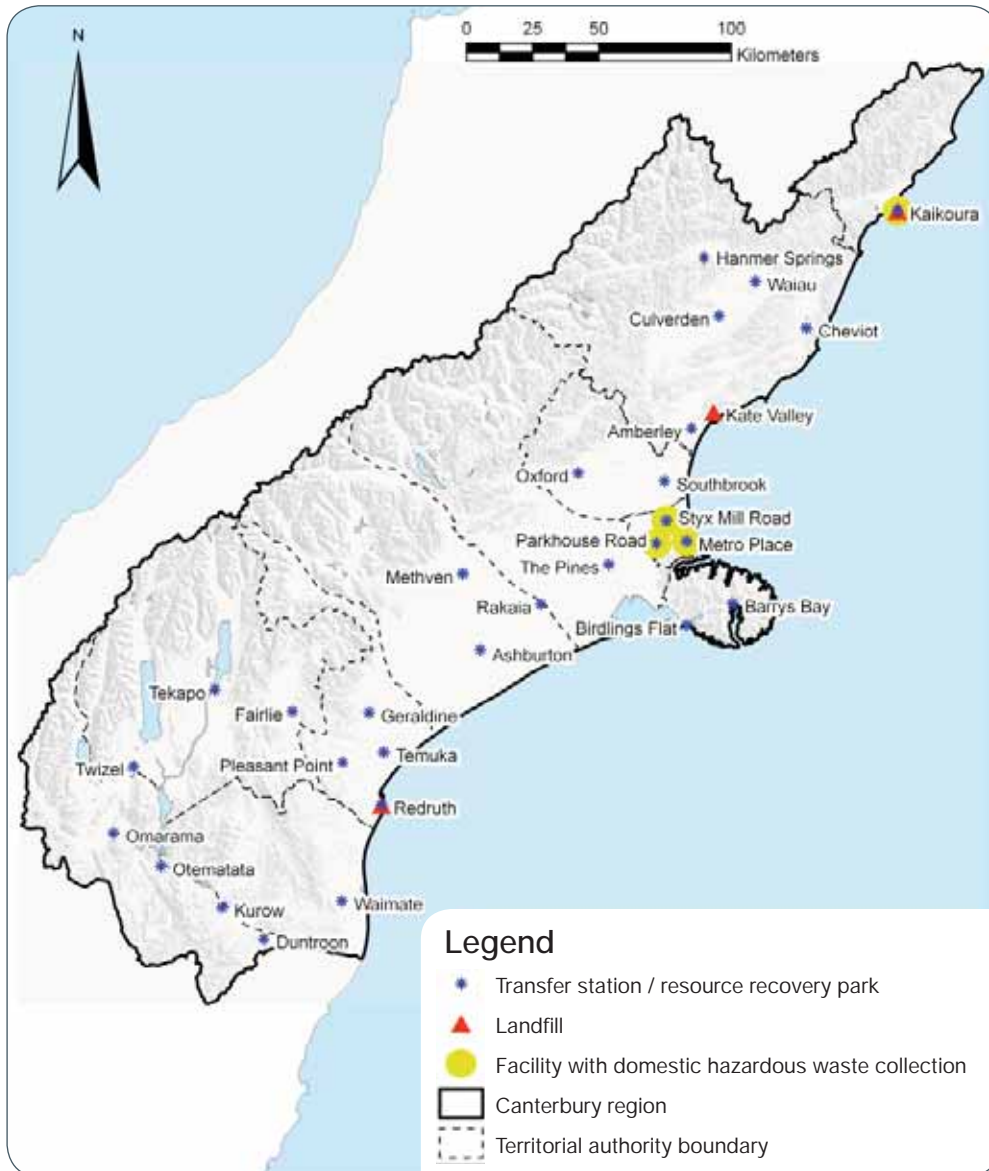


Figure 13.3 Location of landfills, transfer stations and resource recovery parks in Canterbury as at 1 January 2008

Access to kerbside recycling

Figure 13.4 shows the proportion of households with access to kerbside collection of recyclables in 2005/06, by district.

The main features that can be seen in Figure 13.4 are:

- All households in Christchurch city have access to kerbside collection of recyclables
- Between 70% and 80% of households in most districts have access to kerbside collection of recyclables
- Timaru district has a very low percentage of households with kerbside access to recycling (~7%). This is the fortnightly collection of recyclables in Geraldine
- Waimate district did not have kerbside collection of recyclables in June 2005

Overall, access to kerbside recycling in the Canterbury region is good with eight of the 10 Canterbury councils included here providing 70% to 100% of houses in their districts with kerbside collection of recyclables. Many of the transfer stations and resource recovery parks also have recycling facilities (Figure 13.3). Since this information was collected, kerbside collection of recyclables started in Waimate in July 2005 and Timaru expanded its collection from 1 July 2006.

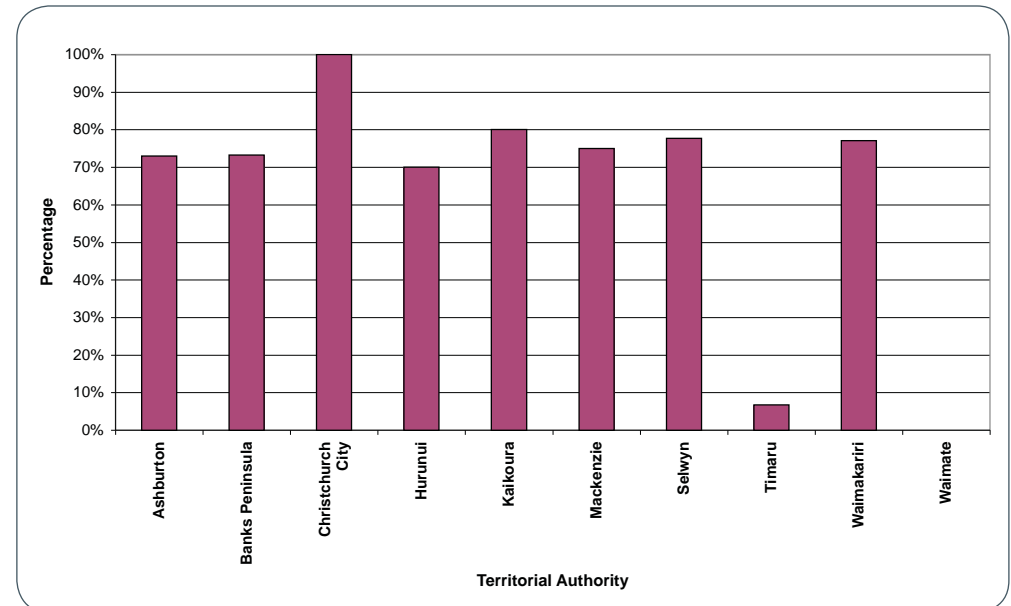


Figure 13.4 Percentage of households in each district with kerbside collection of recyclables; 2004/05 financial year

RESPONSES

Responses to solid and hazardous waste management issues, including the actions taken by Environment Canterbury and its partners to change social attitudes and behaviour towards waste in the region, are summarised in Table 13.4 below.

Table 13.4 Responses to solid and hazardous waste management issues

Issue	Investigations & Monitoring	Policy & Planning	Regulation & Enforcement	Operations	Advocating & Education
The amount of solid waste produced in Canterbury is increasing	Collecting and analysing available waste data Providing information on the progress of Canterbury territorial authorities towards meeting New Zealand Waste Strategy targets	Policy evaluation District Planning Liaison Regional Policy Statement Chapter 18: - Policies 1 and 4 encourage cleaner production and reduction of waste through the waste hierarchy - Cost of waste management and disposal should be met by the waste generator	Resource consent processing and monitoring (discharge consents – landfill, cleanfill, landuse consents)	Encouraging waste reuse by funding a waste exchange network of five waste exchanges	Producing waste education resources Producing resources such as “no junk mail” stickers Waste education and training: raising awareness of waste issues and management; EnviroSchools and schools waste education Encouraging resource recovery and waste reuse and reduction by promoting processes such as composting and waste exchange through Environment Canterbury’s website Advocacy: co-ordination and participation with regional and national groups on waste issues
Safe management and disposal of waste in Canterbury	Gathering information on the number of landfills/resource recovery parks/transfer stations in Canterbury	PNRRP Chapter 4 - Manage or prevent contaminants entering ground or surface from waste management activities PNRRP Chapter 3 - Manage or prohibit the burning of wastes that may release contaminants into the air - Manage or restrict the discharge of contaminants into air from waste management activities Canterbury Waste Joint Committee membership Regional Policy Statement Chapter 18 - Promote the regional co-ordination of waste management. Policies 2 and 3 - Manage current and old disposal sites to minimise any adverse effects on the environment	Resource consent processing and monitoring of landfills (discharge consents, landuse consents) Resource consents and monitoring of closed landfills for passive discharges		

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<p>Safe storage, handling and disposal of hazardous wastes</p>	<p>Investigating hazardous waste management initiatives</p>	<p>PNRRP Chapter 4 - Manage or prevent contaminants entering surface water or groundwater from the storage, handling or disposal of hazardous waste</p> <p>PNRRP Chapter 3 - Restrict or prohibit the burning of hazardous waste</p> <p>- Management or prohibition of discharges of contaminants to air from hazardous waste management activities</p> <p>Hazardous waste management planning</p> <p>Hazardous waste subcommittee membership</p> <p>Developing and updating the Canterbury Hazardous Waste Management Strategy</p> <p>Regional Policy Statement Chapter 18 - Promote the regional co-ordination of waste management. Policies 2 and 3</p> <p>- Manage current and old disposal sites to minimise any adverse effects to the environment</p>	<p>Resource consent processing and monitoring (hazardous substance landuse consents, discharge consents – hazardous substance storage)</p> <p>Providing a 24-hour Pollution Hotline service for spills</p>	<p>Co-ordinating the Canterbury agrichemical collection</p> <p>Installing and upgrading domestic hazardous waste drop-off facilities</p> <p>Co-ordinating the pilot paint exchange project in Ashburton</p> <p>Installing used oil drop-offs</p>	<p>Education and training: raising awareness of hazardous waste issues and management through Environment Canterbury's website</p> <p>Advocacy: co-ordinating and participating in regional and national groups on hazardous substances and waste issues</p> <p>Promoting the used oil drop-off facilities</p> <p>Advocating for appropriate hazardous waste management practices and integrated management regime to central Government and other parties, including industry and community groups</p>
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CASE STUDY 13.1

Canterbury agrichemical collection

Over the years, many practices related to the use of agricultural chemicals have changed. Some products have been withdrawn, others banned and some can no longer be applied because their use is not acceptable to overseas markets. All of this leads to tonnes of unwanted chemicals being stored in rural areas.

Environment Canterbury and the territorial authorities in Canterbury are aware that these unwanted chemicals, if stored or disposed of inappropriately, pose significant risks to the environment and to public health. In 2001, the Hazardous Waste Working Party (HWWP), a group made up of representatives from the territorial authorities and Environment Canterbury, released the Canterbury Hazardous Waste Management Strategy which identified seven priority wastes for the region, one of which was agrichemicals.

After investigation into different options for collecting agrichemicals, it was decided to provide a pick-up service from the holder's property. The advantages of this include reducing the risks of further contamination of the environment by degraded chemical containers, as the material can be safely repackaged on-site by experts who can be contracted for short periods of time. It is the easiest option for the holder of the chemical and, therefore, likely to have the highest participation rate.

The Waimate District Council conducted a successful trial agrichemical collection on behalf of the HWWP in November 2002. During the 2003/04, 2004/05, 2005/06 and 2006/07 financial years, targeted agrichemical collections were undertaken in Canterbury. The project has been run in association with the Ministry for the Environment (MfE) which has provided funding to dispose of a certain amount of chemicals collected each year, except 2006/07. The Canterbury councils meet the costs involved in marketing, identifying, collecting, packing and transporting the agrichemicals, and disposal of chemicals in excess of the MfE allocation.

The councils decide on a target area for collection. The size of this area is dependent on the funds available and the number of properties. The councils contact all farms within the target area by letter asking them if they want to be involved in the collection. In most districts, these letters are followed up with a phone call, and those that wish to take part are included in the collection.

The collection is undertaken by a contractor who travels to the farm, collects any unwanted agrichemicals and safely removes them. Chemicals are then sent for safe disposal either within New Zealand or overseas.

Table 13.3 Tonnes of agrichemicals collected in each financial year

Tonnes of agrichemicals collected				
2002/03	2003/04	2004/05	2005/06	2006/07
3	47	59	35	12

Table 13.3 shows the quantity of agrichemicals collected since the programme began. The 2002/03 collection year was the Waimate district pilot agrichemical collection.

There is a tendency with hazardous waste collections to judge success on the quantity of chemicals that have been collected. However, if the aim of the project is to collect and dispose of all the unwanted chemicals within an area then the true measure of success is the quantity of chemicals left behind after the collection. Unfortunately, this is difficult to measure.

As the collections are carried out in targeted areas and the councils undertake to contact all potential participants within these areas, the area completed has been selected as a measure of success, with a target of 100%. By December 2007, Kaikoura, Hurunui, Banks Peninsula, Mackenzie, Waimate and Waitaki districts had provided a collection service for 100% of their areas. Only Christchurch city, Ashburton, Selwyn, Waimakariri, and Timaru districts were incomplete. These districts are scheduled for completion by 2014.



CASE STUDY 13.2

Canterbury used oil collection facilities

The Canterbury Hazardous Waste Management Strategy highlights seven priority hazardous wastes as having significant potential adverse effects on the environment and outlines issues relating to the handling, storage and disposal of the hazardous wastes. Included in the priority list is waste oil.

A Canterbury-wide network of council-operated used oil collection facilities was established in 2003. Used oil from domestic sources can be dropped off at these sites, usually free of charge. This service is not available to commercial operators. Facilities are available at Kaikoura, Hurunui, Waimakariri, Christchurch city, Banks Peninsula, Ashburton, Timaru, Mackenzie and Waimate districts.

Most used oil collected at the council facilities is transported to Westport for use as an alternative fuel in a cement kiln.

The drop-off facilities were promoted both on radio and in newspapers in 2003/04 and 2004/05. The most appropriate time of the year was selected in order to target the relevant audience.

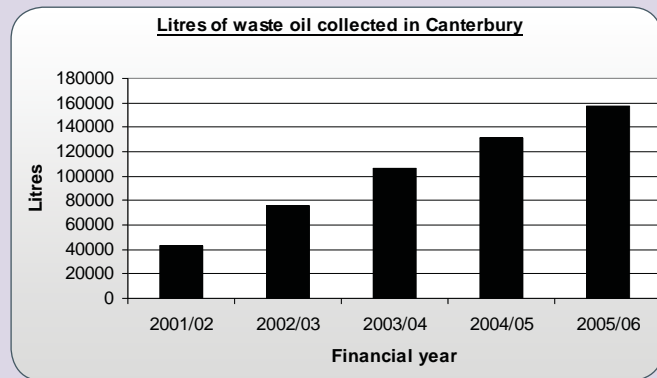


Figure 13.5 Litres of waste oil collected in the Canterbury region, 2001- 2005

Figure 13.5 shows the litres of waste oil collected at transfer stations in Canterbury in the years 2001/02 to 2004/05. It does not include waste oil collected by the 'Hazmobile' collection service in Waimakariri district.

Volumes of waste oil collected in Canterbury increased from just over 40,000 litres in 2001/02 to over 130,000 litres collected in 2004/05.

Some of this increase may be the result of increases in the availability of collection facilities, or it may be because of an increase in awareness through the promotion of the used oil network.

