



<waste

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BECAUSE IT KEEPS COMING –
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AND DUMP IT IN THE TIP





Waste in New Zealand

Our waste will always be a problem because we keep creating it. Waste is any material that is unwanted or unvalued that someone wants to get rid of. Waste can be solid (paper, plastic, metals, food, wood, concrete or soil) or liquid from kitchens, bathrooms, laundries and factories, or it can be gas. It can come from households, businesses, farms, factories and building sites. We used to call it rubbish and dump it in the tip.

The big waste issue is how to manage it so it doesn't make people or the environment sick. Since the 1990s, local government have been required to prepare plans showing how they will manage waste. In 2000, only 24 percent of the 86 local, city and district councils had waste management plans in place – by 2005 that had jumped to 82 percent.

Let's look at the current state of waste in New Zealand.

We have made huge improvements in the way we manage waste. Only 10 years ago, we had 327 rubbish dumps and tips in the country. Today, we have only 90 landfills. Most are properly engineered, with waterproof linings and drainage control. Landfill fires are banned by law, and the larger landfills have a collection network for methane, the gas that is formed as organic waste breaks down. The greenhouse gas contribution from landfills has reduced from 3.5 percent to 2 percent.

Solid waste

We send 3.2 million tonnes of solid waste to landfills in a year. Household waste accounts for only 40 percent of that, with 0.7 million tonnes from kerbside collection and 0.6 million tonnes directly delivered to landfills. That's around 310 kg per person. Half the kerbside collection is organic waste from homes or gardens. Over recent years, while the population has increased the amount of household waste sent to landfills has not. That's a good sign.

Another type of solid waste is called cleanfill – that is, concrete, rubble, plasterboard, wood, steel, brick and glass. The amount of cleanfill created by business is about the same as all the solid waste we send to landfills – 3.2 million tonnes. When you add it all together, that means businesses generate about 5.1 million tonnes of solid waste each year.

Wastewater

We also create liquid waste – in fact, most of our waste is liquid. Approximately 1.5 billion litres of sewage from homes is put out into the environment every day. In 2000, Ministry of Health figures showed that most of our sewage treatment plants (56 percent) had secondary treatment (this means solids floating in the liquid are broken down by bacteria and the sludge is then removed), and a further 36 percent of sewage plants provided tertiary treatment (removing even more sludge and bacteria). While tertiary treatment is the best for our health and the environment, it is expensive and not a priority for some small towns. The Ministry of Health has a subsidy scheme to help small towns improve their wastewater treatment.

Hazardous waste

Waste is hazardous if it poses a risk to people or the environment. Hazardous waste comes from many places – some, like school laboratories, are not obvious.

In New Zealand most hazardous waste goes to a landfill. But where it can't be disposed of safely, we export it to countries that have facilities to deal with it. We send PCBs and other waste pesticides, aluminium dross, jewellery sweeps and excess used lead acid batteries overseas to be treated. In 2003 we exported 5678 tonnes of hazardous waste for safe disposal. In the same year, we imported 14,895 tonnes of hazardous waste for treatment, including old lead acid batteries, waste oil hydrocarbons, laboratory chemicals, copper ammonium chloride and waste solvent. These wastes came from Pacific Islands that do not have the facilities to either recover or appropriately treat hazardous wastes. The wastes are either treated before disposal or processed so that materials can be recovered and re-used in other products.

Agricultural chemicals

In 2003 we started collecting up old, banned and unwanted chemicals stored in people's sheds and on their farms and orchards. This programme is an important part of our commitment to the Stockholm Convention which aims to remove and destroy nasty long-lasting chemicals such as DDT and dieldrin.

By January 2006, thirteen councils were involved in the programme – resulting in about 220 tonnes of old chemicals collected.



Photo courtesy of Auckland Regional Council



Fact

USED OIL HELPS FUEL HOLCIM'S WESTPORT CEMENT KILN.

In 2005, around 14 million litres of used oil was burnt there at high temperatures – this deals effectively with the heavy metals and other hazardous substances. Another nine

million litres of waste oil was used in industrial burners or turned back into fuel oil, and a small amount was made into hydraulic oil.

Used oil

Every year about 60 million litres of lubricating oil is sold in New Zealand. Once used, about 21 million litres of oil is collected and disposed of safely. The largest single Oil Recovery Programme is coordinated by Holcim, the cement manufacturer, and funded by Shell, Caltex, BP and Valvolene. Mobil Oil also provides a similar service for its customers. Some smaller oil companies, councils and garages also help collect used oil.

Used oil contains heavy metals and polyaromatic hydrocarbons, some of which are known to cause cancer. That makes used oil dangerous to human health and the environment so we must manage and dispose of it properly.

New Zealand has been collecting up used engine oil since 1996. Garages play a big part, collecting most of the oil that can be recovered. Increasing numbers of landfills and transfer stations provide collection points for household waste oil.

An unknown quantity of oil is used by small businesses and individuals for other purposes such as chain saw oiling, suppressing dust on rural roads and farm races, or in small low-temperature burners. Councils are now controlling these sorts of uses through their regional plans and resource consents.

Reports of used oil being misused or dumped into the environment are few.

Recycling

Things we don't want anymore can often be used by someone else. A great deal of paper, glass and plastic can be recycled. Ten years ago, only 10 percent of New Zealanders had access to kerbside recycling. Now it is 80 percent. Another 15 percent can recycle at special collection points.

Since 1994, the amount of packaging we recycle has gone from 130,000 tonnes to 340,000 tonnes. The recovery rates for packaging are:

- < recycled plastic – 20 percent
- < recycled steel – 35 percent
- < recycled glass – over 50 percent
- < recycled aluminium – over 60 percent
- < recycled paper packaging – over 70 percent

Fact

IN THE LATE 1990s, THE KAIKOURA LANDFILL WAS CLOSE TO FULL AND THE KAIKOURA DISTRICT COUNCIL THOUGHT ABOUT TRUCKING THE TOWNSHIP'S WASTE SOUTH TO THE CANTERBURY REGIONAL LANDFILL.

The community came up with a different plan – to divert waste that could be recycled, composted or re-used.

Not only have they diverted 70 percent of waste from the landfill and increased the life of the landfill, Innovative Waste Kaikoura Ltd is also earning money from selling recovered goods to markets elsewhere in New Zealand.



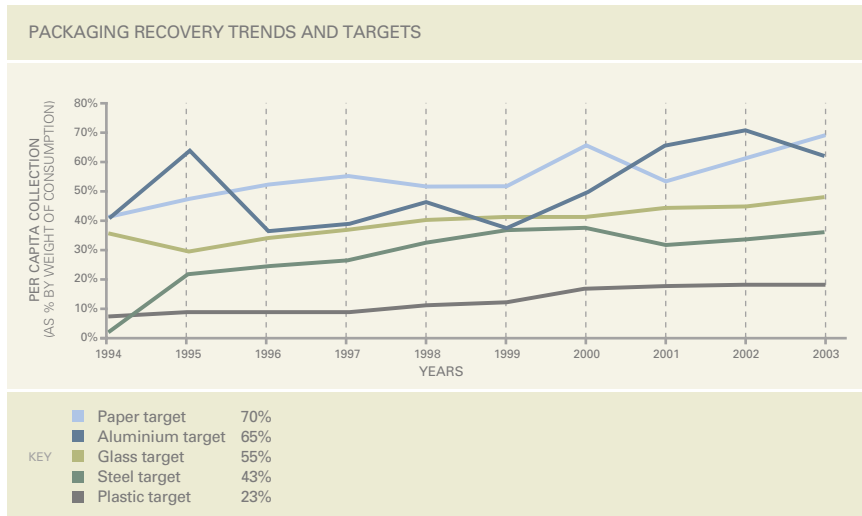
Taking responsibility

In 2002 the New Zealand Waste Strategy was released. It aims to reduce the total amount of waste we create in New Zealand. It also aims to improve how we manage the waste. One way to do this is through partnerships with industry. For example, we have the *2004 Packaging Accord* – a five-year programme to reduce problems associated with packaging.

The trends and 2008 targets for recycling packaging under the Packaging Accord are shown in the graph to the right. The graph lines show the increase in collections of each packaging type, and the targets for each are shown below.

Under the Waste Strategy we are also encouraging product stewardship programmes, where those who make, sell, or use a product take responsibility for managing the waste from their product. Several voluntary schemes have been set up, and include recovering used oil, tracking end-of-life tyres, the Packaging Accord, and Resene Paints' programme to collect unwanted paint.

We wear out between three and four million tyres every year. Whole tyres are problems in landfills because they are bulky, trap air and move around. Above ground, poorly



managed piles of tyres present a significant fire risk. Illegally dumped or stockpiled tyres are an eyesore and can be expensive to shift.

A voluntary scheme was set up with the Motor Trade Association and the tyre industry in 2004 to properly manage old tyres. Called Tyre Track, the scheme collected and disposed of or re-used nearly 1.3 million worn-out tyres in its first 18 months.

Waste from electronic products is also an area of concern. Some individual companies themselves have started take-back and

recycling of their products. Fisher and Paykel recycle old whiteware appliances of any brand at a special Auckland centre. Vodafone and Telecom accept old mobile phones for recycling, and Vodafone takes accessories as well. Hewlett Packard, Dell and IBM take back old computer equipment from their business customers for recycling.

Our attitude to waste has changed over the years from 'out of sight-out of mind', to one of appreciating the need for careful, monitored management of the material that no one wants and making further use of everything we can.

