WASTE MANAGEMENT

SUMMARY 2007-08

OVERVIEW

- Northland Regional Council operates four hazardous waste collection depots in Northland for the collection and/or storage of hazardous substances before transport for disposal. NRC also operates a mobile collection service
- NRC staff undertake inspections of workplaces that store or use hazardous substances, on behalf of the Department of Labour
- NRC provides a 24/7 emergency response team for incidents involving hazardous substances
- NRC also inspects contaminated sites and both closed and operational landfills for compliance with resource consents, rules and regulations

PERFORMANCE TARGETS

To reduce the quantities of hazardous substances and hazardous wastes entering Northland's environment and minimise the adverse effects of these by:	**Target Achieved:**
➢ Facilitating safe and lawful storage of hazardous substances and management of waste hazardous substances by: ▪ Providing a collection, transport, storage and disposal service for waste hazardous substances; ▪ Exporting for safe destruction, the intractable waste hazardous substances that the Council has collected; ▪ Providing a hazardous substance storage compliance monitoring and incident response service; and ▪ Producing an annual report to the Department of Labour and the Council on the performance of these services.	✓
➢ Facilitate the management of contaminated sites in Northland by: ▪ Maintaining and updating a database of potentially contaminated sites, site assessments and remediation; ▪ Promoting the assessment and remediation of significant contaminated sites; and ▪ Promote the availability of contaminated site data.	✓

SUMMARY OF RESULTS 2007-08

- Approximately 5 tonnes of waste hazardous substances collected
- 360 Workplace inspections undertaken
- 27 Environmental Incidents involving hazardous wastes attended
- 15 contaminated sites visited and inspected
- All landfill sites monitored in 2007-08 within their compliance limits

INTRODUCTION

Northland Regional Council (NRC) is responsible for the collection, storage and disposal of waste hazardous substances in the region. Since 1993, NRC has collected and recycled or disposed of over 65 tonnes of waste hazardous substances.

NRC is also responsible for monitoring contaminated sites, and closed and operational landfills throughout Northland. The results of this monitoring are stored in a central Contaminated Sites Database (Selected Landuse Register), which is operated and maintained by council staff.

In addition, NRC, on behalf of the Department of Labour, undertakes inspections of workplaces in the region that store and use hazardous substances and provides a 24 hour, 7 day a week incident response team for incidents involving hazardous substances.

Although NRC has no performance target related to reducing the amount of waste being disposed of in landfills, the Council does have in place a Waste Minimisation Strategy and encourages industry, business and households to reduce their waste production for the benefit of the environment in both Northland, and the country as a whole.

Photo: Plastic bottles collected for recycling

WASTE HAZARDOUS SUBSTANCES

The safe disposal of redundant or unused agricultural chemicals and other waste hazardous substances is an issue for all communities, especially given the limited disposal options available in New Zealand. Currently, only two commercial hazardous waste disposal facilities operate in the North Island, situated in Auckland and Wellington. While some New Zealand landfills offer co-disposal for low-key hazardous wastes, this option is not available in the Northland Region.

Some of the more hazardous agricultural chemicals held by farmers and horticulturists (especially Persistent Organic Pollutants (POPs) such as DDT, Heptachlor, Lindane or Dieldrin) cannot be legally disposed of in New Zealand. These chemicals require special disposal technologies, such as high temperature incineration, and must be shipped overseas.

Collection and Operational Depots

NRC and PGG Wrightson Ltd jointly operate four collection depots, located in Kaitaia, Waipapa, Dargaville and Whangarei. The PGG Wrightson collection depots accept agricultural chemical wastes only, which are documented before being placed in the store. To find out more about these facilities, go to http://www.nrc.govt.nz/Environment/Waste-and-pollution/For-farming/Agrichemical-collection/.

Once stored, the waste becomes the responsibility of NRC, who regularly transport it to the main operational depot in Whangarei. The operational depot is purpose-designed for waste hazardous substances. At this depot, the waste hazardous substances are repacked, labelled and placed in temporary storage until being dispatched to Auckland for long-term storage and eventual disposal.

To find out more about disposing of hazardous household waste, go to http://www.nrc.govt.nz/Environment/Waste-and-pollution/For-homes/Household-hazardous-waste/.

Photo: Wrightson's chem-shed at Waipapa

Spill and safety equipment is available on-site at all PGG Wrightson collection depots, in the event of an emergency such as the accidental spill of chemicals. NRC regularly updates emergency procedures, as well as restocking equipment when necessary.

NRC also operates a mobile collection service where individual properties throughout Northland are visited to recover chemicals that may be leaking, require repackaging or are in a deteriorating condition. NRC also provides assistance and advice to private organisations requiring chemical disposal, including the collection of laboratory wastes from schools and industrial wastes (such as solvents and timber treatment sludges).

Waste Hazardous Substances Collected

During the 2007-08 financial year, approximately **five tonnes** of waste hazardous substances were collected for long-term storage, redistribution or pre-treatment. This figure is higher than for 2006-07, when four tonnes were collected.

The waste hazardous substances collected in the 2007-08 financial year included:

- *Empty containers*
  Approximately one and half tonnes of empty containers were collected from throughout the region. These containers have not been counted in the total of hazardous substances collected. All containers were triple rinsed. The rinsate was then collected and disposed of through a specialist waste company in Auckland. The majority of the containers were shredded and disposed of by the same contractor.

- *Insecticides and fungicides*
  Approximately one tonne (20% of the total) of insecticides and fungicides were collected from throughout the region, with the majority of these products originating from the Kerikeri area. Approximately 90% of the total volume of insecticides and fungicides collected were destroyed due to the deteriorating condition of the contents, or the labels being illegible and therefore the contents unknown.

- *Persistent Organic Pollutants*
  Approximately 825 kilograms of POPs were collected (17% of the total). Some of the POPs handed in for destruction were particularly hazardous, including quantities of DDT, Chlordane, 245t, 24d dust and Mercury. All of these wastes have been sent overseas for destruction by high temperature incineration.

- *Solvents and laboratory chemicals*
  Approximately one tonne (20% of the total) of used solvents and laboratory chemicals were collected from schools, commercial laboratories and commercial entities. In the case of solvents, the majority were reconstituted and recycled, while the laboratory chemicals were all disposed of through an Auckland based specialist waste management company.

- *Herbicides*
  Just over 2 tonnes of herbicides (43% of the total) were collected from throughout the region, predominately from the four jointly owned and operated Northland Regional Council and PGG Wrightson collection depots. Approximately 20% of the herbicides collected are still readily available on the market and legal to use. These were redistributed to land care groups and other organisations for weed control. The remainder of herbicides collected were in a deteriorating condition and were exported to Europe for destruction.

Photo: Collected Waste Hazardous Substances

Agrecovery

Agrecovery is a New Zealand-wide plastic container stewardship, developed for the agriculture and forestry sector. It will give farmers and growers access to a sustainable and environmentally preferred disposal alternative to landfilling or burning their containers.

The programme will be funded on an ongoing basis by way of a levy on products put in the market by participating brand owners (agriculture and forestry product manufacturers). The *Agrecovery* foundation will manage all facets of the scheme.

Agrecovery has agreed to provide shipping containers or similar for the temporary storage of agrichemical containers. It is likely that these containers will be located near Kerikeri and in Whangarei. The programme will commence as soon as venues can be arranged.

Storage and Disposal of Waste Hazardous Substances

As mentioned previously, there are no facilities available in New Zealand for the disposal of many of the waste hazardous substances dealt with by NRC. As New Zealand produces a relatively small volume of waste hazardous substances, it appears unlikely that any New Zealand based disposal technology will become available in the short or long-term.

Under the Basel Convention, waste hazardous substances can be shipped elsewhere for disposal, at high temperature incineration units in Canada, Europe, or the United States for example. A French company, with a branch in Auckland, currently holds the licences for the export and destruction of NRC's waste hazardous substances.

NRC has at present a small amount of waste hazardous substances stored in Auckland, as the majority of it has already been sent overseas for destruction. The remaining waste hazardous substances are packed in UN approved containers and stored in licensed premises. Council staff regularly inspect the integrity of the containers and their contents until they are sent overseas for destruction.

The photo below shows the packing shed, where waste hazardous substances are packed and sealed in drums for storage.

Photo: Chemicals in storage awaiting disposal

Hazardous Substances Compliance Inspections and Emergency Response

NRC staff also undertake inspections of work places in the region that store and use hazardous substances, in order to check compliance with the Hazardous Substances and New Organisms Act (HSNO) 1996.

During the 2007-08 financial year, 360 work place inspections were undertaken in Northland. The end of June 2008 marked the second year of a 3-year contract with the Department of Labour to undertake such inspections.

During the reporting period, the following work places were prioritised for inspection:

- Spray painters – automotive;
- Spray painters – polishers - furniture manufacturers;
- Printers;
- Retailers;
- Location Test Certificates – new; and
- Transit Depots.

In addition to work place inspections, an important component in the contract is to educate, via information visits, the owners of premises storing and using hazardous substances. The aim is to increase the level of awareness of the HSNO Act as it applies to individual premises.

NRC also provides a 24 hour, 7 day a week incident response team for incidents involving hazardous substances. In the 2007-08 financial year, a total of 27 incidents involving hazardous substances were attended by NRC's emergency response team.

CONTAMINATED SITES

The Australian and New Zealand Environment Conservation Council (ANZECC) define a contaminated site as:

"*A site at which hazardous substances occur at concentrations above background levels and where assessment indicates it poses, or is likely to pose, an immediate or long-term hazard to human health or the environment*".

By definition, the management of contaminated sites is closely linked to the management of waste hazardous substances.

According to the Resource Management Act 1991 (s2), contaminated land is defined as the following:

***"Contaminated land** means land of one of the following kinds:*
(a) If there is an applicable national environmental standard on contaminants in the soil, the land is more than contaminated than the standard allows; or
(b) If there is no applicable national environmental standard on contaminants in soil, the land has a hazardous substance in or on it that-
(i) has significant effects on the environment;
(ii) or is reasonably likely to have significant adverse effects on the environment."

Photo: Car Wreckers Yard

Site Inspections and Investigations

In the 2007-08 financial year, 15 of the sites listed on the Contaminated Sites database (Selected Landuse Register) were visited and inspected. By visiting the sites listed on the register, the information that is specified can be authenticated and updated. This leaves approximately 100 sites still to be visited in the future.

Investigations are also ongoing into a number of animal dip sites in the region. There are possibly around 50,000 contaminated dip sites throughout New Zealand.

Underground storage tank removal

Over the past year, the four major oil companies continued their programme of fuel tank removal and replacement in the region. This programme is ongoing as fuel tanks come towards the end of their manufactured lifespan or create an environmental threat from leakage.

Photo: De-commissioned diesel tank

National Working Group and Environmental Standards

A national working group consisting of representatives from all Regional Councils and the Ministry for the Environment has been established with the aim of setting a consistent approach to the collection of information, how this information is entered into each Region's database and a standard classification for contaminated sites.

The Ministry has also developed a programme of work to address key issues and gaps that exist in how New Zealand manages contaminated land. It will provide more central government leadership and direction to councils managing contaminated land, which will include National Environmental Standards (NES). For more information on this work, go to - http://www.mfe.govt.nz/issues/hazardous/contaminated/direction-land-management.html

Photo: Exterior of former Gasworks in Whangarei

SOLID WASTE MANAGEMENT

Landfill Monitoring

As a result of the Resource Management Act 1991, the vast majority of small, and often poorly planned, rural tips (landfills) in Northland have now closed. In most cases, these have been replaced with Refuse Transfer Stations.

With the recent closure of Hakaru landfill in the Kaipara District, there are now only two operational landfills in the region at Ahipara and Russell, both of which are located in the Far North District. All operational landfills are monitored on a 6-monthly cycle, whilst all closed landfills and Refuse Transfer Stations are visually inspected every year.

Surface water, groundwater and sediment samples are collected from sites adjacent to all operational landfills. These samples are then analysed for a range of parameters, including general water quality indicators and potential contaminants (such as heavy metals). In addition, organic scans are carried out annually on samples of landfill leachate, to screen for the possible presence of pesticide residues and other contaminants.

All landfills monitored in 2007-08 were within their specified resource consent limits and there was no evidence of any significant contamination to nearby waterways. For further information on compliance rates, please also refer to the section entitled "Annual Compliance" within this Annual Monitoring Report.

Photo: Whangae waste transfer station and remediated landfill site

Waste Minimisation

Waste minimisation is about preventing waste at source through the efficient use of raw materials, energy and water. Waste minimisation involves action on several fronts:

- *People*
  Many reductions in waste can be achieved through better "housekeeping". It is essential that people are aware of the issues surrounding waste and are motivated and trained to prevent it.
- *Systems*
  A systematic approach to measurement and control highlights deficiencies and problems, enables targets to be set and maintains levels of efficiency.

- *Technology*
  Investment in new technology can improve productivity and reduce waste generation, leading to immediate paybacks.

Waste Minimisation at the Northland Regional Council
NRC has in place a Council-wide 'Waste Minimisation Strategy'. The aim of the strategy is to promote recycling within the Council and to encourage waste minimisation throughout the organisation.

NRC has had a recycling system established for over 4 years, which includes recycling bins in the lunchroom and outside barbeque area, and paper recycling bins in photocopier rooms and in peoples work areas. All staff take an active role in recycling paper, cardboard, all types of glass, aluminium cans, plastic bottles, batteries, toner cartridges and food scraps.

A comprehensive audit of NRC's business operations and offices has not yet been undertaken but it is planned to happen in the near future. The audit will look at:

- Ancillary materials - materials used for cleaning and maintenance.
- Consumable materials - paper, toner cartridges and other office consumables.
- Packaging materials used to package and transport goods.
- Energy - power consumption and fuel usage.
- Water usage.
- Solid waste.
- Costs associated with waste removal, for example, skip bin and other wastes by waste management contractors; and
- Quantifying how much money is spent on each of the resources listed.

Waste Minimisation in the Community
Waste minimisation is just as important in households as it is in business or industry. There are several ways you can reduce the amount of rubbish that your household produces:

- *Recycling*
  Both the Whangarei and Far North District Councils have kerbside collection of recyclable materials in place. Recyclable materials include paper, cardboard, all types of glass, aluminium cans and some types of plastic bottles and containers. The Resource Recovery Park in Whangarei, transfer stations and the two remaining landfills in Northland all have recycling facilities. In addition the Kaipara District Council has recycling facilities at both the Dargaville and Hakaru closed landfill sites. Contact your local District Council for more information.

Photo: Greenwaste recycling facility

- *Green waste*
  By creating your own composting system at home for green waste and food scraps you can significantly reduce the amount of solid waste that will need to be disposed of in a landfill. For more information on developing a compost heap in your backyard, contact your local District Council or check out the website below for the 'Reduce Rubbish' campaign.

- *Environmental awareness as a consumer*
  By being aware of packaging when shopping you can significantly reduce the amount of waste produced in your home. Try to buy products with minimal packaging, recyclable packaging or where the product to packaging ratio is high. For example, there is less packaging for a two-litre bottle of milk than 2 one-litre bottles of milk. Use boxes or reusable bags for grocery shopping rather than plastic bags and support companies with the 'Environmental Choice New Zealand' label.

  There are many helpful tips on how you can minimise the rubbish your household or business produces at the following website: www.reducerubbish.govt.nz

Waste Minimisation Act 2008

The Waste Minimisation Act is due to gain Royal Assent in September 2008.

What is the Waste Minimisation Act?

- Levies all waste disposed of in a landfill at, initially, $10 per tonne;
- Assists and, when necessary makes, producers, brand owners importers, retailers, consumers and other parties take responsibility for the environmental effects of their products; and
- Clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation.

Key Points of the Waste Levy

- The waste levy will come into force on 1 July 2009;
- The levy is initially set at $10 per tonne. This is estimated to generate $31million per year to improve waste minimisation;
- Landfill operators will have to pay the levy based on the weight of material disposed at landfill, but they may pass this cost onto households and business;
- Households and business can minimise payment of the levy by reducing, reusing and recycling as much waste as possible, and thus keeping the amount of rubbish to a minimum. The revenue generated by the levy will be used to make it easier to reduce, reuse and recycle;
- Half of the money that is generated by the levy will go to territorial authorities, on a population basis, so that they can improve waste minimisation in their area;
- The remaining 50% (minus administration costs) will be put into a contestable fund. Local government, communities, businesses and other organisations can apply for funding from this fund for waste minimisation activities; and
- The Minister for the Environment will review the levy in 2011 and then every three years to see whether it is effective and adequate.

Product Stewardship

- One of the key elements of the Waste Minimisation Act is the principle of product stewardship to reduce waste from products;
- Product stewardship means that producers , brand owners, importers, retailers, consumers and other parties take responsibility for the environmental effects of their products-from “cradle-to-grave”; and
- Product stewardship is based on the idea that polluter pays, rather than the ratepayer, taxpayer or the environment.

Examples of types of product stewardship

- Take back schemes where manufacturers, brand owners, importers and /or retailers accept a product back for recovery or disposal at the end of its useful life;
- Deposit/refund schemes where a consumer receives a refund of a deposit when they return the product for recycling or disposal at the end of its useful life;
- Labelling to inform consumers about the environmental harm caused by product during its lifecycle, how to avoid or reduce that harm, provisions for recycling, or safe disposal of the product at the end of its useful life; and
- Product design requirements to reduce the waste produced and encourage recycling.

For more information on the Act, go to http://www.mfe.govt.nz/laws/waste-minimisation.html.