WASTE MANAGEMENT

The Northland Regional Council is responsible for the management and collection of waste hazardous substances and the monitoring of contaminated sites throughout Northland. For more details see the Council's performance targets (refer page 9) for Hazardous Waste and Contaminated Site Management.

In the 2004 - 2005 financial year approximately 14 tonnes of waste hazardous substances (refer pages 2 - 3) was collected from throughout the Northland Region, of which 2,494 kilograms was Persistent Organic Pollutants (POP's). The Regional Council's stockpile of intractable wastes, including POP's, was disposed of in 2004-2005. Since 1993, 54 tonnes of waste hazardous substances have been collected and recycled or disposed of.

During 2004-2005 approximately 25 sites listed on the contaminated sites (refer pages 4 and 5) database were visited and inspected and a former timber treatment site, which is adjacent to a public water supply, was remediated. Work has been delayed on developing a consistent approach to the management of contaminated sites in New Zealand.

The Regional Council carries out monitoring of both operational and closed landfills within the region to check for compliance with consent conditions. The monitoring results showed that landfills in Northland are having minimal impact on the receiving water quality. With the recent closure of Pohe Island landfill there is now only three operational landfills in Northland. See solid waste management (refer page 6) for more information.

Although the Regional Council has no performance target related to reducing the amount of waste being disposed off in landfills, the Council does have in place a Waste Minimisation Strategy (refer pages 7 and 8) and encourages industry, businesses and households to reduce their waste production.

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 this country. 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 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.

Collection and Operational Depots

The Regional Council and Wrightson Limited jointly operate four collection depots, located in Kaitaia, Waipapa, Dargaville and Whangarei. The Wrightson collection depots accept all received chemical wastes, which are documented before being placed in the store. Once stored, the waste becomes the responsibility of the Northland Regional Council, who regularly transport it to the Regional Council operational depot in Whangarei.

The Regional Council 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 despatched to Auckland for long-term storage or disposal. The Regional Council operational depot was moved from Pohe Island landfill to the new Whangarei District Council Resource Recovery Park in late October 2005.

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

Northland Regional Council 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. The Council also provides assistance 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 2004/2005 financial year approximately 14 tonnes of waste hazardous substances were collected for long-term storage, redistribution or pre-treatment. This is considerably more than the previous year, when approximately eight tonnes of hazardous waste was collected. The increase is mainly due to the mobile collection service, which the Regional Council operated throughout Northland.

The waste hazardous substances collected in the 2004-05 financial year included:

- ***Empty Containers***
  Approximately two tonnes of empty containers were collected from throughout the region. All containers were triple rinsed and the rinsate was 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 three tonnes of insecticides and fungicides were collected throughout the region with the majority of these products originating from the Kerikeri area like last year. Approximately 98% 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 2.5 tonnes of Persistent Organic Pollutants (POP's) were collected, mainly during the mobile collection service. Some of the POP's handed in for destruction were particularly hazardous substances including quantities of DDT, Dieldrin, 245t, 24d dust and Lindane. All of these wastes have been sent overseas for destruction by high temperature incineration.

- ***Solvents and Laboratory Chemicals***
  Approximately three tonnes of used solvents and laboratory chemicals were collected from schools, commercial laboratories and commercial entities. In the case of the solvents the majority were reconstituted and recycled, while the laboratory chemicals were all disposed of through an Auckland based specialist waste management company.

- ***Herbicides***
  Approximately four tonnes of herbicides were collected throughout the region, predominately from the four jointly owned and operated Northland Regional Council and Wrightson collection depots.

Over 50% 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.

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 the Council. 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 the Council's waste hazardous substances.

The Regional Council has less than a tonne of waste hazardous substances stored in Auckland, as the majority of it has recently been sent overseas for destruction (arranged through Ministry for the Environment). The remaining waste hazardous substances are packed in UN approved containers and stored in licensed premises. The Council regularly inspects the integrity of the containers and their contents until they are sent overseas for destruction.

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 and 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.

Site Inspections and Investigations

In the 2004 - 2005 financial year, approximately 25 of the sites listed on the 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 225 sites still to be visited in the future.

A preliminary investigation of a former timber treatment plant situated adjacent to the Paihia public water supply was undertaken by Council staff. High levels of copper, chromium and arsenic were identified in soils immediately adjacent to the timber treatment plant. The levels detected were some of the highest recorded in the region. Approximately 40 tonnes of contaminated soil was removed from the site and transported to Auckland for destruction.

Validation sampling undertaken following the removal of contaminated soil showed that the remaining soil on the site met the Industrial Unpaved Guidelines as listed in ***"The Health and Environmental Guidelines for Selected Timber Treatment Chemicals"*** which can be viewed under publications on the Ministry for the Environment's Website.

Investigations are also ongoing into a number of animal dip sites in the region.

Underground Storage Tank Removal

Over the 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.

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 meeting with the aim of having a consistent approach to the collection of information, entry of data onto databases, and the categorisation of contaminated sites. However the newly proposed National Environmental Standards may in fact alter the categorisation of contaminated sites.

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."

The Ministry for the Environment has recently released an information sheet entitled ***"Proposed Standards for the Clean Up of Contaminated Land to Protect People"*** *(refer website http://www.mfe.govt.nz/publications/hazardous/contaminated-land-infosheet-oct05/*). This sheet provides technical information on the proposed National Environmental Standards (NES) for the clean up of contaminated land. A full discussion document will be released in November 2005 for public consultation.

One of the difficulties with this information sheet and proposed National Environmental Standards for Regional Councils is that the proposed NES only lists contaminant levels to protect the health of people. No soil contaminant levels are listed to protect natural and physical resources such as groundwater, which is currently covered under the RMA definition. This could have a major effect on Regional Councils and their work with Selected Landuse Registers and site investigations. Many of the sites listed on databases may well have to be removed.

Solid Waste Management

Landfill Monitoring

Under the Resource Management Act 1991, the vast majority of small, and often poorly planned rural tips (landfills) throughout Northland have closed, and in most cases been replaced with transfer stations. Also with the recent closure of Pohe Island landfill in Whangarei, there are now only three landfill sites actively operating in the Northland region. Two of these are based in the Far North District at Ahipara and Russell and one in the Kaipara District at Hakaru near Mangawhai.

Operational landfills are monitored either seasonally or biannually, while closed landfills are visually inspected every year. Surface water, groundwater and sediment samples are collected from sites adjacent to the 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 the 2004 - 05 year were within their specified resource consent limits and there was no evidence of any significant contamination to nearby waterways.

Resource Recovery Park

The Pohe Island landfill site, which has been Whangarei Districts' main refuse disposal site since 1964, finally closed on 31 October 2005. On 1 November 2005 the new Resource Recovery Park located in Rewarewa Road opened for business.

The new park accepts refuse and recycling from the Whangarei Districts' refuse transfer stations, kerbside collections and direct delivery by residents. All refuse will be transported to Redvale Landfill in Auckland for disposal. The large recycling centre has been set up to accept all recyclable materials. Refer to the "Waste Minimisation" section on pages 8 and 9 for information on what can be recycled and ways you can reduce your household solid waste production.

Green waste will also be accepted at the Resource Recovery Park. It also will be transported to Auckland for chipping, mulching and made into compost.

The Council has shifted its waste hazardous substances temporary storage and packaging facility to the Resource Recovery Park. Waste hazardous substances collected from the various depots around the region and those deposited at the Resource Recovery Park will be sorted, packed and temporarily stored prior to being transported to Auckland or overseas for disposal. Refer to the "Waste Hazardous Substances" section on pages 2-4 for more information.

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 employees 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, this 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 Northland Regional Council

The Northland Regional Council has in place a Council-wide waste minimisation strategy. The waste minimisation committee dissipated with the move to the new Water Street office and has not yet been re-established but it has been highlighted as a priority for the next two years. The aim of this team is to promote recycling within the Council and to encourage waste minimisation throughout the organisation.

The Council has had a recycling system established for over 3 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 the Councils business operations and offices has not yet been carried out due to time constraints 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 - materials used for office paper, toner cartridges, and other consumables.
- Packaging materials used to package and transport goods.
- Energy-power consumption and fuel usage.
- Water usage.
- Solid waste.
- The costs of removing the skip bin, drums and other wastes by waste management contractors.
- 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 businesses and 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 new Resource Recovery Park in Whangarei, transfer stations and the three remaining landfills in Northland all have recycling facilities, except Kaipara District. Contact your local District Council for more information.

- ***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 disposal in a landfill. For more information on developing a compost 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 higher. For example there is less packaging for a two-litre bottle of milk then 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:

http://www.reducerubbish.govt.nz

Performance Targets

Facilitate the collection, transport, re-use, storage, treatment and disposal of redundant agrichemicals and other small quantities of waste hazardous substances, where there is no appropriate service provided, by:

- Operating in conjunction with Wrightson waste agrichemical collection facilities at Whangarei, Dargaville, Waipapa and Kaitaia.
- Operating a facility in Whangarei for the short-term storage of waste hazardous substances awaiting transport.
- Providing a collection, transport and a disposal service for the other quantities of waste hazardous substances.
- Export for safe destruction, the intractable waste hazardous substances that the Council has in long-term storage.

Facilitate the management of contaminated sites in Northland, by:

- Maintaining and updating a database of potentially contaminated sites, related site assessments and remediation.
- Promoting the assessment and remediation of significant contaminated sites.
- Promote the availability of contaminated site information through the LIM and PIM systems by providing the District Councils with the database of potentially contaminated sites, related site assessments and remediation.