

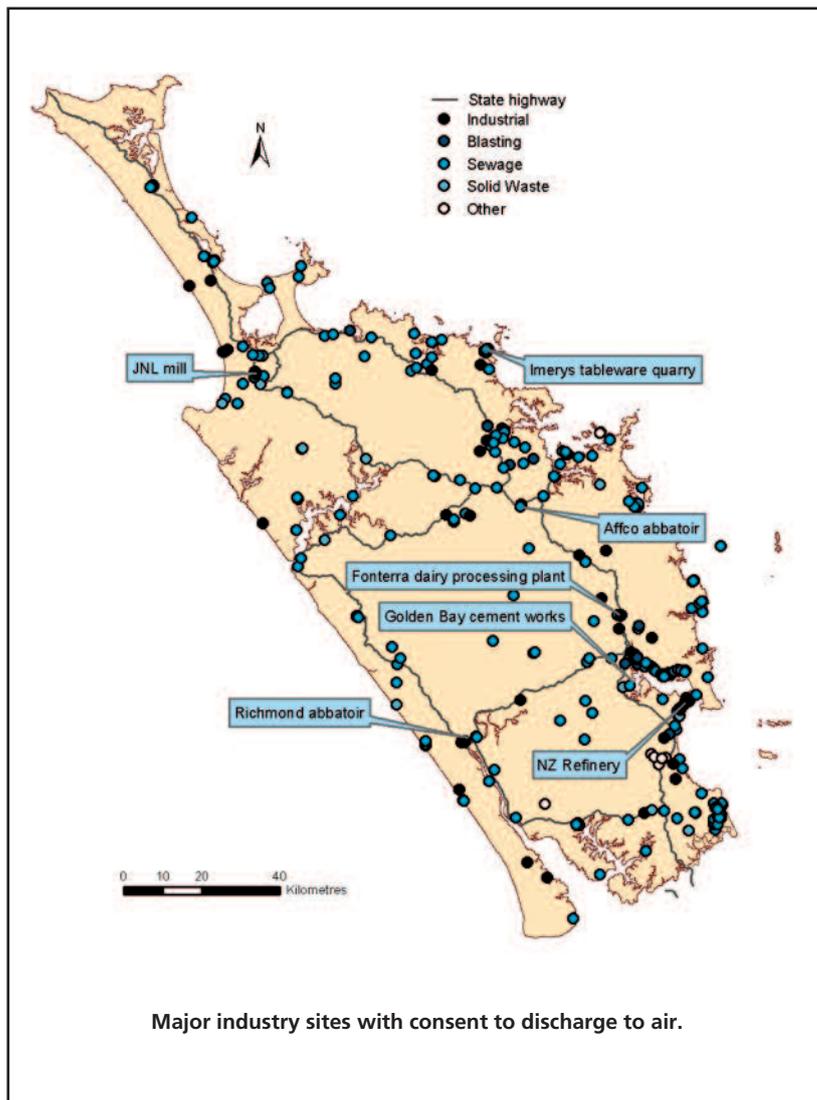
This report card is one in a series produced to explain the current state of Northland's environment. The cards are based on the 2007 State of the Environment Report and keep you up to date on the work being done to improve our environment.

Northland's air quality

Air quality is determined by climate and topography (the shape of land features) as well as the combined effects of human activity – industrial, commercial and domestic.

Northland's prevailing south-westerly winds quickly disperse pollutants and this, along with low population density, a limited amount of heavy industry and low traffic volumes, means Northland enjoys a high standard of natural air quality most of the time. However, monitoring by the Council has identified that at times, levels of certain pollutants in the air approach or exceed national air quality guidelines.

Since it first established its Environmental Hotline in 1993, Northland Regional Council has responded to more than 11,500 environmental incidents in Northland. Approximately 40% of these incidents are air related. In any given year, between one third and one half of all reported incidents are air related. The most frequently recorded incidents relate to burning or smoke nuisance, agricultural spray drift, odour, industrial emissions or dust nuisance.



What are the pressures affecting Northland's air quality?

Pollutants are substances that can cause harm or discomfort to living organisms when introduced into the environment. Air pollutants can also affect visibility, create odour, deposit dust or corrode man-made materials.

The Council monitors 90 consents closely to ensure there are no significant adverse effects arising from the consented activity.

Sources of pollutants include:

- **Industry** – At 1 January 2007, there were 310 resource consents for discharges to air being monitored by the Council. Major industry sites with consents to discharge to air are shown in the map opposite.
- **Transport** – Vehicles emit carbon monoxide, particulate matter, oxides of nitrogen, sulphur dioxide, ozone and benzene. In Whangarei city, monitoring has identified that levels of carbon monoxide, sourced from motor vehicles in Bank Street, occasionally exceed ambient air quality guidelines. Vehicles also contribute up to 50% of inhaleable particulate matter (PM₁₀) in urban areas in the region.
- **Home Heating** – Many homes use open fires for heating during the winter months. Collectively, these home fires reduce air quality to the point where it can exceed national environmental standards for PM₁₀. In Whangarei city, wood fires contribute up to 50% of air pollution in urban areas and up to 70% in residential areas.
- **Backyard Burning** – Disposing of refuse by burning it in the backyard is no longer acceptable in urban areas. Smoke inhalation can have a serious effect on human health, particularly for the elderly, very young or those who suffer from respiratory or heart conditions. The number of burning and smoke nuisance incidents in Northland has increased rapidly in recent years with the majority of these incidents recorded in the Whangarei area.
- **Agriculture** – New Zealand is unique among developed countries in that approximately half of green house gas emissions come from agricultural activities. In Northland, the main pollutants from agriculture are dust, spray drift of agrichemicals and odour.

What can you do to help?

You can help to reduce the amount of air pollution in our region by looking at the following factors in your home, school and business:



Domestic wood fires

- Use a low emission burner;
- Clean your chimney at least once a year;
- Never burn rubbish, plastics or treated wood in your wood fire; and
- Never use coal in a wood burner and only burn dry wood.



Backyard Burning

Avoid burning rubbish and vegetation in your backyard; compost vegetation instead and recycle other material where possible. Find out more: www.nrc.govt.nz/backyardburning



Reduce your carbon footprint

Everyone can help to reduce the effects of climate change by reducing their carbon footprint. Find out more: www.nrc.govt.nz/takeaction

What is in Northland's air?

The Council monitors certain air pollutants to find out the quality of the air we breathe. Air quality monitoring in Northland shows that some areas are susceptible to poor air quality, particularly during the winter months when calm, cold conditions allow levels of pollutants to build up. The following are monitored on a regular basis in Northland:

- **Particulate Matter (PM₁₀)** – small solid or liquid particles produced by both natural activities and people, such as dust, smoke, fog or mist. Monitoring in Northland shows that levels of PM₁₀ in the atmosphere are generally below the limit. However, there are instances where levels, particularly in Whangarei city, approach or exceed the limit, usually during the winter months.
- **Carbon Monoxide** – a colourless, odourless gas which can be hazardous to human health. It can be a product of both natural and human activities, such as motor vehicles and domestic burning. Levels are generally below national standards however, in places where vehicle emissions can accumulate, such as along congested roads, tunnels or car parks, levels can approach or exceed the limits set by the government.
- **Sulphur Dioxide** – a colourless gas produced from the combustion of fossil fuels that reacts with moisture in the air to create sulphuric acid aerosols. It is a major contributor to acid rain. Three sites in Northland are monitored by the Regional Council and the results show peak concentrations at each site remain below New Zealand air quality guideline limits.

What does the Regional Council do to keep our air clean?

Regulation – The Council has two policy documents to manage Northland's air resource. The Regional Policy Statement for Northland provides an overview of resource management issues, including air quality. The Regional Air Quality Plan for Northland contains rules that permit, control or prohibit activities that cause discharges of pollutants to air. Plan Change 2 to this document, notified in August 2007, prohibits backyard fires in the Whangarei urban area, in order to reduce the number of burning and smoke nuisance-related incidents and improve air quality for the local community.

Monitoring – There are around 310 resource consents for discharges to air in Northland. Of these, 90 are closely monitored by the Council to ensure there are no significant adverse effects on the environment. In order to predict the impact of future developments on the region, the Council is currently compiling an emissions inventory of all known existing discharges to air. This will allow the Council to work out the impact of any future projects on our air quality.

Investigation – All environmental incidents reported to the Council are recorded, investigated and then reported to the monthly Council meeting. The appropriate action is taken to remedy or avoid any adverse effect on the environment and, in serious cases, this may include formal enforcement action.

Education – Regional Council staff assist new and existing industries with technical advice, information and experience to help prevent air-related incidents and to resolve any existing issues. The Council also runs erosion and sediment control workshops for developers, earthwork contractors and planners. Through education, incidents such as dust nuisance can be avoided.

24/7 Environmental Hotline
0800 504 639