



Air

Wairoa and Northern Coast catchments

Mohaka catchment

Esk and Central Coast catchments

Heretaunga and Ahuriri catchments

Tukituki catchment

Pōrangahau and Southern Coast catchments



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What do we know?

Human activities can lead to contaminants being released into the air. Some emissions can have a negative impact on our air quality – they look bad, affect human health and the environment, and contribute to climate change. Natural sources of pollution also affect air quality.

In Hawke's Bay, a mix of natural sources, like sea salt, windblown soil and pollens, and human activities, such as industry, shipping, transport, and home heating all impact air quality.

The Regional Council monitors air using the National Environmental Standards for Air Quality NES-AQ first set in 2004. These standards include limits on fine particulates, known as PM10 and four pollutant gases: carbon monoxide, nitrogen dioxide, ozone, and sulphur dioxide. HBRC has continuously monitored PM10 levels since 2004, and PM2.5 levels in the Napier and Hastings urban areas since 2017. Similar PM10 monitoring in the Awatoto industrial area has been in place since 2012. These three 'airsheds' have elevated levels of fine particulates from time to time.

What adds to air pollution? Wood burners used for home heating, outdoor fires to burn garden or horticultural waste, and land management practices. On calm, frosty winter days, smoke doesn't rise and disperse. Instead, it stays low to the ground.

The health effects of air pollution are widely known. The most vulnerable people are those with pre-existing respiratory and heart conditions, diabetes, children, and the elderly. Air pollution worsens asthma attacks. It contributes to respiratory and cardiovascular diseases and is considered carcinogenic. The effects can lead to increased hospital admissions, greater use of medication, days off school, lost productive days and even premature deaths. The pollutants we experience are part of our everyday activities, such as driving cars and using wood burners to heat homes.

Some pollutants affect our health even when present at low levels



Known issues

Air quality in Hawke's Bay is generally good most of the year, however:

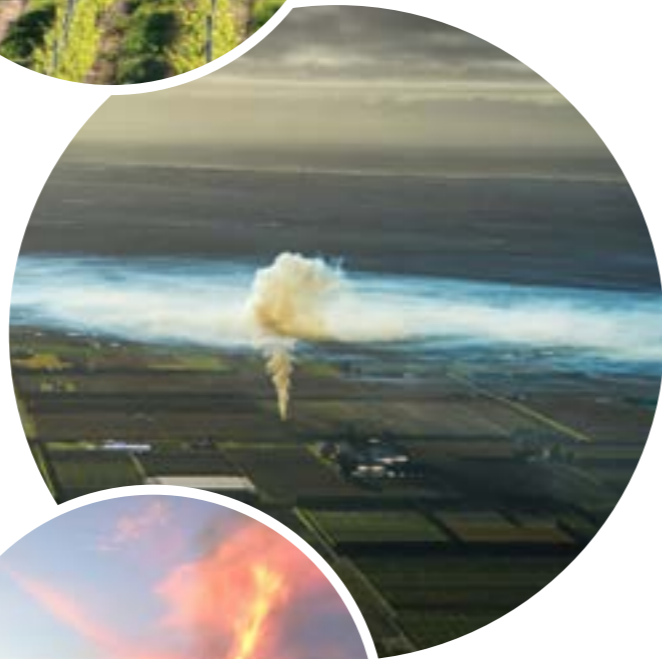
Winter pollution due to wood burning is one of the major air quality issues in Hawke's Bay.

At times, in some urban centres, concentrations of fine particulates and nitrogen dioxide can exceed World Health Organisation (WHO) Air Quality Guidelines.

Smoke complaints from burning green-waste on horticulture and lifestyle properties on the Heretaunga Plains has increased in the past five years; concerns have also been raised over the use of agrichemicals, including organic sprays, and the impact of spray drift.

Windblown soil, dust, and debris cause local air quality issues and result in complaints from people nearby.

Research has found that adverse health effects occur at much lower contaminant concentrations than previously thought. The air quality rules in HBRC's plans are now over 10 years old and need to be reviewed and updated to reflect more current science, and to address emerging issues around climate change, outdoor burning, agrichemical use, odour, and dust issues.



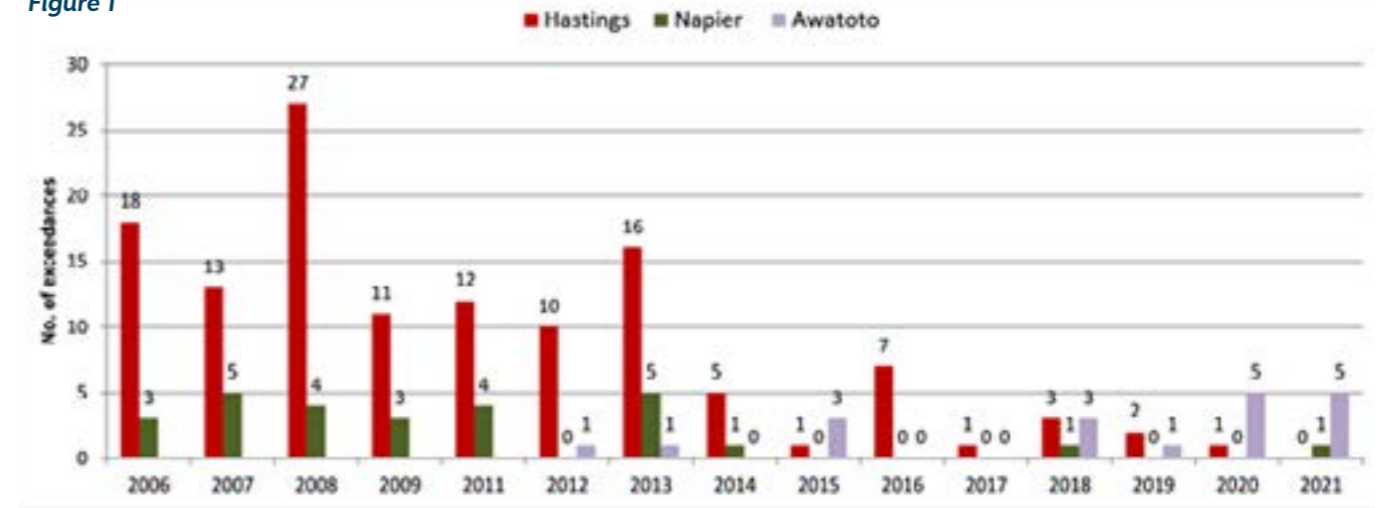
How we are doing?

Air quality in the Hastings and Napier urban areas has improved over the past decade due to big changes in domestic heating emissions. Many residents have switched to cleaner residential heating sources – a key feature of HBRC's 'Clean Heat' and 'Sustainable Homes' programmes. While particulate concentrations now only occasionally exceed New Zealand's current health-based standards, initial monitoring suggests that the WHO Air Quality Guidelines will be harder to achieve. The Awatoto airshed PM10 exceedances are largely generated from naturally occurring salt spray. However not all exceedances are exclusive to salt spray, so minimising emissions from industry at Awatoto is important.

The Regional Council has monitored PM10 since 2005 and actively achieved great improvements to air quality. In recent years (refer Figure 1). HBRC has continued to take a hard line on pollution incidents. Successful prosecutions have been made for offensive odour, smoke, horticultural spray drift, and the burning of prohibited items. Monitoring, education, and enforcement action has resulted in strong consent compliance and fewer incidents reported to HBRC's 24/7 Pollution Hotline.

In 2020-21, there were fewer burning complaints and infringements than previous years. Burning complaints almost halved and one-third less infringements were issued, compared to 2019-20.

Figure 1



Where to from here?

HBRC has environmental goals for air quality in its Regional Resource Management Plan (RRMP) and Strategic Plan 2020-2025. Several goals aim to meet WHO guidelines by 2025. This includes limits on PM2.5 to manage discharges to air, with specific rules for Napier and Hastings airsheds.

The Kotahi Plan presents an opportunity to:

- Review current information, environmental data, and monitoring trends to inform whether international guidelines are appropriate for Hawke's Bay's unique local circumstances.
- Engage with the regional community about the health impacts of poor air quality.
- Strengthen commitments to managing human impacts on air quality, and the co-benefits of reducing greenhouse gas emissions in Hawke's Bay.
- Set clearer limits and standards for discharging contaminants to air based on contemporary health science research, such as shifting from PM10 to PM2.5 metrics.

- Review the effectiveness of current regulations, such as those controlling:
 - o Outdoor burning of materials on primary production land.
 - o Discharges to air from industrial premises, production land, ie. organic and agrichemical spray drift, and other land use activities.
 - o Household fireplaces and the emission of particulate matter.
- Develop education initiatives and financial assistance programmes to further complement appropriate regulations for domestic home heating and outdoor burning.