



Ministry for the
Environment
Manatū Mō Te Taiao

Clean Healthy Air for All New Zealanders:

The National Air Quality Compliance Strategy to Meet the PM₁₀ Standard

Disclaimer

The Compliance Strategy has been prepared, under contract by Emission Impossible Ltd and Greg Hill- Resource Management/Planning Consultant to the Ministry for the Environment. All reasonable measures have been taken to ensure the quality and accuracy of the information contained herein.

Acknowledgements

The authors would like to thank the following people and organisations for contributing to the development of this document:

- Members of the National Air Quality Working Group
- Herb Familton, Auckland Council
- Tim Mallett, Environment Canterbury

This report may be cited as:

Ministry for the Environment. 2011. *Clean Healthy Air for All New Zealanders: National Air Quality Compliance Strategy to Meet the PM₁₀ Standard*. Wellington: Ministry for the Environment.

Published in August, 2011 by the
Ministry for the Environment
Manatū Mō Te Taiao
PO Box 10362, Wellington 6143, New Zealand

ISBN: 978-0-478-37249-6 (print)
978-0-478-37250-2 (electronic)

Publication number: ME 1064

© Crown copyright New Zealand 2011

This document is available on the Ministry for the Environment's website:
www.mfe.govt.nz

Ministerial Foreword

All New Zealanders are entitled to breathe clean air. This compliance strategy is a key step in making this an achievable goal.

Air quality across our country is highly variable, with some areas consistently complying with the National Environmental Standard, while other areas regularly exceed it.

The challenge for government – both local and central – is how to compel people to take action to improve the quality of their air.

This is of particular relevance when we acknowledge that the majority of bad air is the result of domestic practices such as open fires and vehicle emissions.

New Zealand has had national environmental standards for air quality since 2004. In 2009 I announced a review of the regulations relating to the ambient levels of particulate matter less than 10 micrometres (PM10). This review was prompted by concerns with the stringency of the standard, the lack of equity for industrial air pollution sources and to difficulty in achieving the target of 2013 for a number of regions.

As a result of this review, the standards were revised and the amended regulations came into force on 1 June this year.

Implementing regulations alone will not bring about the changes needed to ensure all New Zealanders have clean air. A number of other programmes are also in place to encourage people to take steps to improve their air quality. This includes standards for wood burners, subsidies for switching to clean air solutions and guidance for reducing vehicle emissions.

This Compliance Strategy is another tool to support the achievement of the targets in the Resource Management (National Environmental Standards for Air Quality) Regulations 2004.

It has been prepared for decision makers in regional and unitary councils, on whose shoulders the implementation of the Regulations ultimately falls.

By providing a toolkit of graduated responses, the Compliance Strategy provides a range of options to be used by regional and unitary councils to support their communities to achieve the air quality targets.

The 2020 ambient air quality for PM10 can only be achieved through the combined efforts of individuals, council officers, industry, business and politicians. I encourage all councils to make use of the tools outlined in this strategy.



Hon Dr Nick Smith
Minister for the Environment

Contents

Ministerial Foreword	iii
1 Introduction	1
1.1 What is the purpose of the Compliance Strategy?	1
1.2 What do we mean by “compliance”?	1
1.3 What is covered by the strategy?	2
1.4 Who is the intended audience?	2
1.5 How does the strategy fit with other documents?	3
1.6 How is the strategy structured?	4
2 Why?: Clean Healthy Air for All New Zealanders	5
2.1 Health effects of PM ₁₀ pollution	5
2.2 State of NZ airsheds	10
3 What?: The Legislative and Policy Context for Air Quality Management	12
3.1 Roles and responsibilities for air quality management in New Zealand	12
3.2 The Resource Management Act 1991	14
3.3 National environmental standards for air quality	17
4. How?: The Toolkit of Compliance Options	20
4.1 Background	20
4.2 Education	23
4.3 Assisted compliance	25
4.4 Advice	29
4.5 Reporting	32
4.6 Review	34
4.7 Action	36
5. When?: Upcoming Milestones	41
5.1 Timeline for critical implementation steps	41
5.2 Proposed future work by the Ministry	44
6. What If?: Airsheds Fail to Meet the PM₁₀ Standard	46
6.1 Powers of the Minister for the Environment	46
6.2 Intervention by the Minister	47
Glossary	49
References	52

Appendix 1: Examples of Information Requests issued under s27 of the RMA	54
A1.1 Example request for monitoring data	55
A1.2 Example request for a progress report	57
A1.3 Example request for an airshed action plan	59
A1.4 Example request for domestic solid-fuel appliance information	61

Tables

Table 1: Summary of critical milestones arising from the Regulations	21
Table 2: Elements of an air quality management framework	37
Table 3: Timeline for critical dates in complying with the PM ₁₀ standard	41

Figures

Figure 1: The Compliance Strategy and its supporting documents	3
Figure 2: The size of a PM ₁₀ particle relative to other objects	6
Figure 3: Effects on health from PM ₁₀ exposure	7
Figure 4: Pyramid of health effects associated with air pollution	8
Figure 5: Air quality in currently non-complying airsheds, 2005-2009	11
Figure 6: Legislative and policy framework for air quality management in New Zealand	13
Figure 7: The response categories in the compliance toolkit	22
Figure 8: Good practice guidance for improved air quality management in New Zealand	30

1 Introduction

1.1 What is the purpose of the Compliance Strategy?

This Compliance Strategy has been developed to ensure New Zealand meets the ambient PM₁₀ 24-hour standard set by the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (including the 2011 amendments). It sets out the practices that regional councils could adopt to meet the standard for PM₁₀ (particulate matter less than 10 micrometres) and thereby deliver clean healthy air for all New Zealanders.

Many locations in New Zealand experience poor air quality, primarily due to home heating during winter and to a lesser extent due to emissions from motor vehicles. Air pollution from all sources is estimated to cause more than 1,600 premature deaths, 930 hospitalisations and 2.6 million restricted activity days in urban areas in New Zealand every year¹ (ARC, 2010). The majority of these health effects are from PM₁₀ emissions.

Air quality management in New Zealand is governed by the Resource Management Act 1991 (RMA) and involves a number of agencies. The Minister for the Environment is responsible for recommending national environmental standards to guarantee a set level of protection for the health of all New Zealanders. Regional councils and unitary authorities are in turn responsible for ensuring that national standards are met in their regions. The Ministry for the Environment liaises between and provides national guidance to councils to assist them with improved air quality management and reports back to the Minister on progress in achieving the air quality standards.

Delivering clean healthy air for all New Zealanders will require the collective and collaborative efforts of the councils, their communities, the Ministry and the Minister. The Compliance Strategy recognises this. The activities involved in achieving compliance range from education through to action. This Strategy outlines how and when these “compliance activities” will work together to ensure the PM₁₀ standard is met and, importantly, who is responsible for undertaking them.

Delaying compliance has significant health consequences and costs for New Zealanders living in areas that do not meet the PM₁₀ standard. Accordingly, the Compliance Strategy also covers the powers available to the Minister to investigate the performance of any council that is not making reasonable progress in meeting the standard.

1.2 What do we mean by “compliance”?

The word “compliance” means different things to different people but usually refers to a range of activities carried out by central and local government that have regulatory functions. The purpose of carrying out compliance is to ensure that people and organisations adhere to rules and regulations for the “public good”.

¹ For the population living in urban areas in 2006 as taken from the Census

In this Strategy, the Ministry for the Environment is promoting a **toolkit of “compliance activities”**, ranging from education through to action. Use of the ‘toolkit’ is one of the ways councils can achieve the **desired outcome of improved air quality**.

In practice, compliance with the PM₁₀ standard will need to occur at multiple levels. Councils are required to attain compliance with the standard for their areas and will need to develop action plans for improving air quality in polluted airsheds. While councils will be reporting to the Ministry on their progress in terms of the programmes and rules they are able to implement in their regions, they will also be reporting to their communities to achieve compliance uptake at the community level. In turn, communities and stakeholders will need to comply with any rules and conditions set by their local council in order to achieve the PM₁₀ standard.

1.3 What is covered by the strategy?

This Strategy has been developed for the ambient PM₁₀ 24-hour standard, set by the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (including the 2011 amendments).

The ambient air quality standards are the minimum requirements that outdoor air quality needs to meet in order to guarantee a ‘set level of protection’ for human health and the environment. The phrase ‘set level of protection’ is used deliberately – it does not mean that all adverse health impacts will be avoided. This is because some pollutants (eg, PM₁₀) do not have a safe threshold below which no adverse health impacts are experienced.

The ambient PM₁₀ 24-hour standard is only one of many standards covered in the air quality regulations. However, the generic principles outlined in this Strategy could easily be applied to achieving compliance with standards for other time periods or other contaminants in future.

This Strategy **does not address any of the other contaminants** covered by the revised regulations, such as:

- carbon monoxide (CO)
- nitrogen dioxide (NO₂)
- ozone (O₃)
- sulphur dioxide (SO₂)
- dioxins and other toxics or
- landfill gas.

Guidance on the implementation of the Regulations in their entirety (including prohibited activity standards relating to emissions of toxic air contaminants, control of greenhouse gas emission at landfills and other ambient air quality standards) is contained in the Users’ Guide (MfE, 2011a). The Users’ Guide is intended to outline how to implement the Regulations rather than how to achieve compliance. It is a critical ‘companion’ to this Strategy document.

1.4 Who is the intended audience?

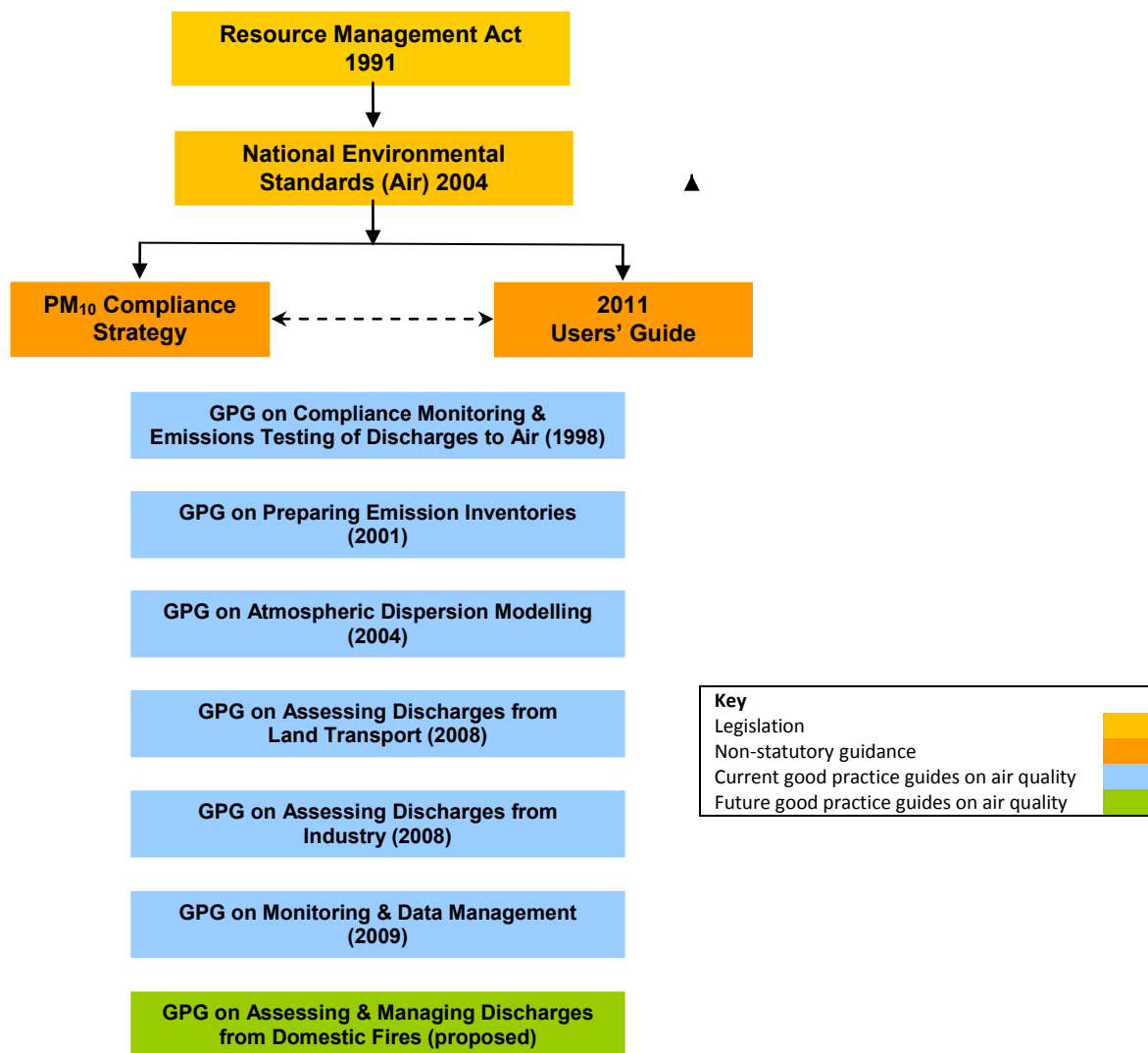
This Strategy is aimed principally at regional council officers and their elected representatives. This is because ultimately it is these people who are responsible (under the Regulations) for

ensuring that the ambient PM₁₀ standard is met in their regions. However, it is likely to be of interest to other stakeholders, such as industry, business, resource management consultants, non-governmental organisations, environmental groups and local communities.

1.5 How does the strategy fit with other documents?

The Compliance Strategy fits into a framework of legal and guidance documents for managing air quality in New Zealand, as shown in figure 1.

Figure 1: The Compliance Strategy and its supporting documents



The Ministry for the Environment has also published good practice guides on assessing and managing the effects of dust (MfE, 2001a) and odour (MfE, 2003) but these are not shown in figure 1 as they are not directly related to meeting the Regulations.

There are also linkages with key research programmes. One example is the “Healthy Urban Atmospheres” programme, which will provide measurements and tools for successful air quality management in New Zealand’s cities².

1.6 How is the strategy structured?

The Compliance Strategy is structured as follows:

- Chapter 2 discusses the “why?” – poor air quality in some parts of New Zealand that the Compliance Strategy is targeting.
- Chapter 3 outlines the “what?” – relevant legislative and policy context which air quality management needs to follow.
- Chapter 4 describes the “how” – the toolkit of compliance activities that are available to assist councils to achieve the PM₁₀ standard.
- Chapter 5 presents the “when” – the critical implementation dates and proposed future work.
- Chapter 6 reviews the “what if?” – the possible interventions and their triggers available to the Minister for the Environment in the event that effective implementation is not achieved.

A glossary and list of references are included at the end.

² This 8-year research programme commenced in October 2008 and is being undertaken by the National Institute for Water and Atmospheric Research Ltd (NIWA) funded by the Ministry of Science and Innovation (MSI).

2 Why?: Clean Healthy Air for All New Zealanders

Clean healthy air contributes to New Zealand's quality of life - not only people's health, but also the natural functioning of and the "beauty of the natural and physical environment" (MfE, 2007). Air and air quality can be described as both a taonga³ and a part of the traditional kaitiakitanga⁴ for Māori.

New Zealand has good air quality in most locations for most of the time. However, solid fuel (wood and coal) used for home heating and exhaust emissions from transport combine to produce unacceptable air quality in about 22 locations, particularly during winter.

Urban air pollution contains a complex mixture of gases and particles which affects the quality of air we breathe. A pollutant of particular concern is PM₁₀ – particulate matter less than 10 micrometres⁵. Air pollution from all sources is estimated to cause more than 1,600 premature deaths, 930 hospitalisations and 2.6 million restricted activity days in urban areas in New Zealand every year⁶ (ARC, 2010). The majority of these health effects are from PM₁₀ emissions.

This chapter covers the sources and health effects of PM₁₀, which population groups are the most susceptible to these effects and the state of PM₁₀ concentrations currently in New Zealand. The intent is to provide background on why it is important to meet the ambient PM₁₀ standard and indicates the likely work councils will have to invest, in order to deliver clean healthy air to their regions. Detailed information on PM₁₀ health effects is available in a separate factsheet that has been prepared by the Ministry (MfE, 2011b).

2.1 Health effects of PM₁₀ pollution

2.1.1 What is PM₁₀?

Particulate matter is the collective term used to describe very small solid, liquid or gaseous particles in the air. Some of these particles are big enough to be seen while others are so small that they are invisible to the human eye and small enough for us to inhale.

As shown in figure 2, a PM₁₀ particle is less than 10 micrometres (µm) in diameter, or one-fifth of the diameter of a human hair. PM₁₀ pollution includes particles referred to as 'coarse' (between 2.5 and 10 µm) and 'fine' (less than 2.5 µm, also known as PM_{2.5})⁷.

³ A taonga in Māori culture is a treasured thing, whether tangible or intangible.

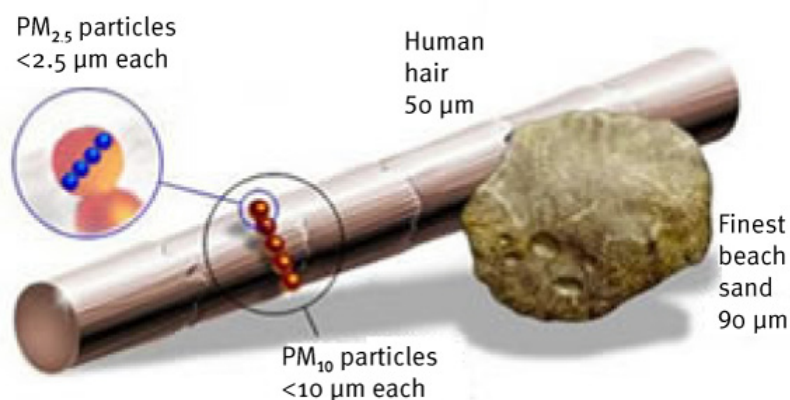
⁴ Kaitiaki is the term used for the Māori concept of guardianship, for the sky, the sea, and the land. A kaitiaki is a guardian, and the process and practices of protecting and looking after the environment are referred to as kaitiakitanga.

⁵ A micrometre is a millionth of a metre and is represented by the symbol µm.

⁶ For the population living in urban areas in 2006 as taken from the Census.

⁷ Some publications describe PM₁₀ as 'fine' particulate matter. While PM₁₀ does have a fine component, it also contains a coarse component and therefore it is not referred to as 'fine' particulate matter in this document.

Figure 2: The size of a PM₁₀ particle relative to other objects



Source: Ministry for the Environment.

2.1.2 Where does PM₁₀ come from?

PM₁₀ can be produced naturally or from human activity. It can be emitted directly or can be formed after other pollutants (such as sulphur dioxide, nitrogen oxides and some organic compounds) undergo complex reactions in the atmosphere. The different types of particles, chemical composition and concentrations depend on the location, time of day and year, season and weather.

PM₁₀ comes from sources such as burning coal, oil, wood and light fuel oil in domestic fires, motor vehicles and industrial processes. Natural sources of particles include sea salt, dust, pollens and volcanic activity. In most places in New Zealand, levels of PM₁₀ in the air are at their highest in winter months, due to a higher use of domestic fires.

Particles from different sources (eg, domestic fire emissions as opposed to sea salt) will have quite different chemical compositions, different physical characteristics and therefore potentially quite different toxicities. However, conclusive evidence from epidemiological studies is not yet available to prove the effect of these differences.

The World Health Organisation recommends that **all PM₁₀ is treated as equal, irrespective of source**, as follows:

*“There are now substantial data available on the sources and composition of PM and on personal exposures to particles of various population groups. The information shows the complex characteristics of PM as the mixture varies spatially and temporally. **The mass-based standards that have been proposed inherently assume that all airborne PM has the same potential to cause adverse health effects, regardless of chemical composition or physical characteristics.** While both observational and experimental findings imply that particle characteristics are determinants of toxicity, definitive links between specific characteristics and the risk of various adverse health effects have yet to be identified.” (WHO, 2006)*

2.1.3 What effect does PM₁₀ have on health?

There is a substantial body of evidence that breathing particulate matter (PM) is harmful to human health, particularly smaller fractions such as PM₁₀, PM_{2.5} and even finer particles.

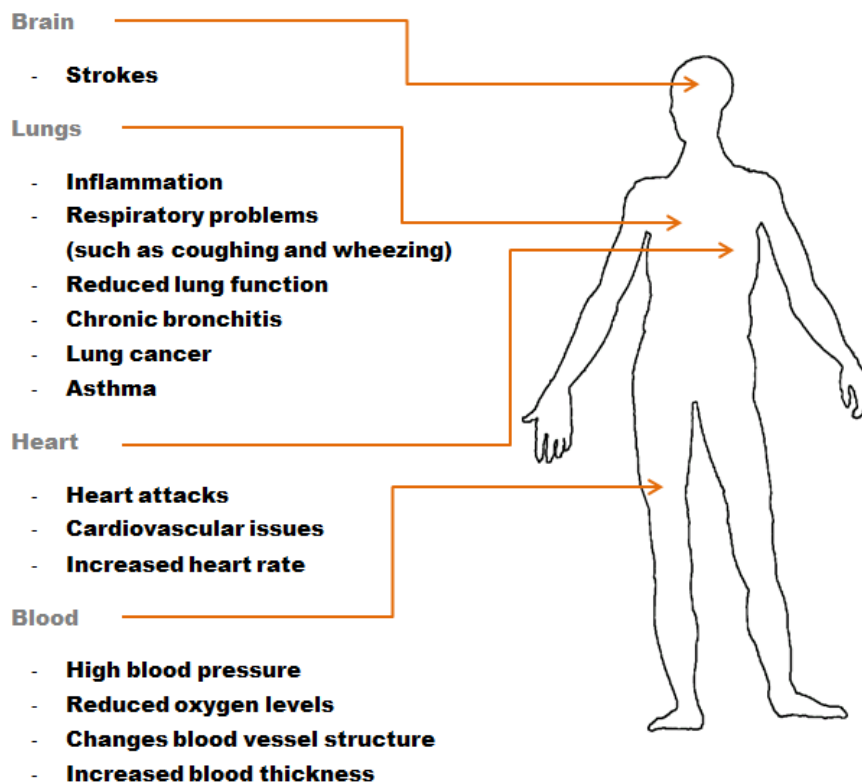
Generally larger particulate matter (between 2.5 and 10 µm) deposits in the upper airways whereas smaller particulate matter (less than 2.5 µm) deposits in the very small airways deep in the lung. Inhaled ultrafine particulate matter may enter the bloodstream and be carried around the body.

The evidence of adverse health impacts from PM arises from several major lines of scientific investigation:

- characterisation of inhaled particles
- consideration of the deposition and clearance of particles in the respiratory tract and the doses delivered to the upper and lower airway and the alveoli
- animal and cellular studies of toxicity
- studies involving inhalation of particles by human volunteers
- epidemiological studies carried out in community settings.

Epidemiological studies focus on the statistical relationships between PM levels and health impacts, including premature death. Toxicological studies investigate the biological mechanisms through which health impacts can occur.

Figure 3: Effects on health from PM₁₀ exposure



Source: Aphekom, 2011.

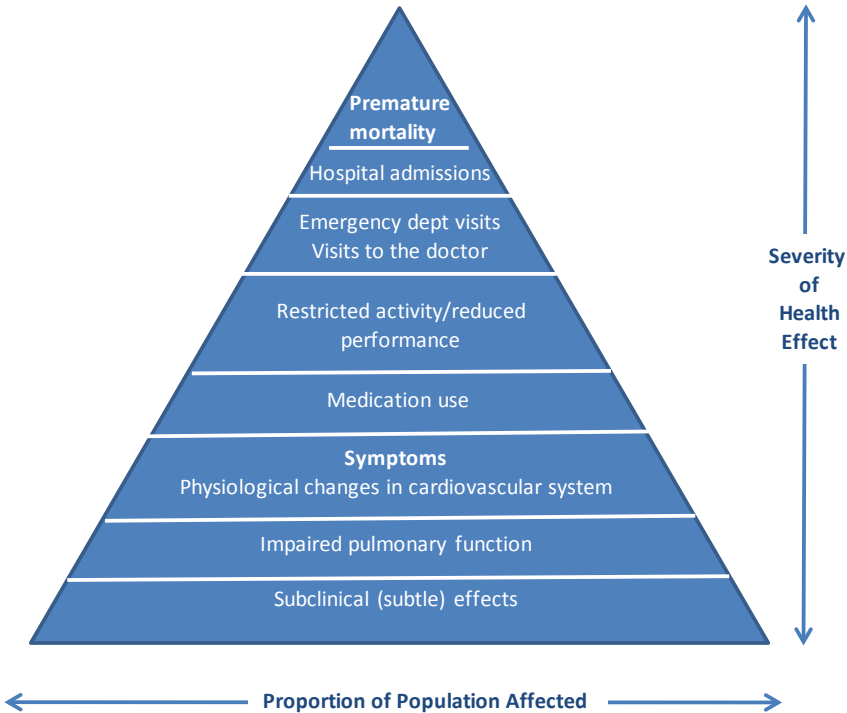
The health effects⁸ that occur following inhalation of PM are predominantly respiratory and cardiovascular as shown in figure 3. The impacts range from functional changes (eg, reduced lung function) to symptoms, impaired activities (eg, school or work absenteeism), doctors’ or emergency room visits through to hospital admissions, reduced life expectancy and death. More recent evidence includes pregnancy-related outcomes (eg, low birth weight) and increased infant mortality.

Research has shown that PM_{2.5} is more hazardous than PM₁₀ in terms of adverse health effects.

The proportion of people affected by less severe health effects is much larger than the proportion of people affected by more severe health effects as shown in figure 4.

In addition to the acute (short term) effects of PM (ie, effects arising shortly after an increase in PM levels), there is now a large body of evidence on the chronic (long term) effects of PM. These studies do not support the hypothesis that PM pollution causes premature death by “harvesting” the very frail who would have died in a few days anyway. PM - mortality associations are generally stronger at longer time levels.

Figure 4: Pyramid of health effects associated with air pollution



Source: World Health Organisation, 2006.

⁸ Adverse health effects that involve increased illness or disease are generally referred to as ‘morbidity’ effects, while those involving premature death are classified as ‘mortality’ effects.

2.1.4 Who is affected?

Susceptibility depends on factors that are unique for each individual (for example, age, health status, genetic makeup) as well as exposure (eg, time spent outdoors, proximity to major roads).

Based on health reviews, there are groups within the population who are more affected by air pollution than others. These susceptible groups are:

- elderly people
- children (including babies, infants and unborn babies)
- people with pre-existing heart or lung disease
- people with respiratory conditions
- asthmatics
- diabetics
- pregnant women
- Māori.

Airway deposition models suggest that people with pre-existing respiratory and cardiovascular disease receive higher doses of PM in their airways and lungs compared to healthy people.

2.1.5 What is the health impact of PM₁₀ in New Zealand?

National health impacts of air pollution in New Zealand were first comprehensively quantified in a study released in 2007 known as HAPINZ⁹. Health risks and costs due to people's exposure to air pollution from all major sources were estimated, using a base year of 2001. The HAPINZ study found that about 1,400 New Zealanders die prematurely from air pollution in urban areas each year, resulting in total economic costs of \$1.14 billion per annum (Fisher et al, 2007).

A recent update, factoring in population growth to 2006, indicates that this figure may be even higher, with around 1,640 premature deaths and an overall health burden of \$1.62 billion (ARC, 2010).

Anthropogenic (man-made) sources are responsible for the majority of the health burden resulting from air pollution, with domestic home heating and motor vehicles being significant contributors.

More than half of all bronchitis cases, and acute respiratory and cardiac hospitalisations resulting from anthropogenic pollution in 2001 were associated with the use of wood and coal for home heating (Fisher et al, 2007). Exhaust emissions from vehicles are also significant, particularly in cities. It is estimated that the number of New Zealanders that die prematurely from traffic-related air pollution is similar to the number killed in road traffic accidents (Fisher et al, 2002).

Industrial emissions, as well as natural sources such as pollen, mineral dust and sea salt, can also contribute to PM₁₀ levels. However, industrial emissions are generally a far smaller proportion in New Zealand urban centres overall compared to transport and domestic fire emissions.

⁹ HAPINZ stands for the Health and Air Pollution in New Zealand

There is **no ‘safe’ threshold for PM₁₀**. While poor visibility may be associated with high PM₁₀ levels, the risk of adverse health effects remains even when there is good visibility.

In 2004, national environmental standards for air quality were introduced in New Zealand to provide a guaranteed level of protection for the health of New Zealanders. The daily level set for PM₁₀ is 50 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$) as a 24-hour average (midnight to midnight). To comply with the standard, this level cannot be exceeded more than one day each year.

A national air quality guideline was put in place in 2002 to set an acceptable annual average level of PM₁₀ (20 $\mu\text{g}/\text{m}^3$). The guideline represents the minimum standard that outdoor air quality should meet in order to protect human health and the environment (MfE, 2002).

2.2 State of NZ airsheds

2.2.1 How is air quality managed?

In New Zealand, air quality is managed by ‘airsheds’ (also known as ‘gazetted airsheds’). In this context, the term ‘airshed’ can be considered to mean an ‘air quality management area’ (ie, an area delineated by the regional council for the purposes of managing air quality). The term airshed is analogous to ‘catchments’ or ‘watersheds’ used in the management of rivers.

Councils have identified and made public (through the *New Zealand Government Gazette*) populated areas that are known, or have the potential, to have air quality which exceeds the national air quality standards. Some airsheds are also identified based on factors such as: the number of people living in the airshed, its unique weather patterns and geography, or because local air emissions (eg, local industrial activity) need to be managed separately.

As at July 2011, the Minister had gazetted 71 airsheds on behalf of regional councils and unitary authorities. These airsheds extend upwards from ground level, with no specified upper limit, and include coastal areas. To date, approximately 1.5 per cent of New Zealand’s total land area has been gazetted as an airshed. This equates to an area in which an estimated two-thirds of New Zealand’s population live. Areas outside airsheds are generally sparsely populated, and, as a result, little PM₁₀ monitoring occurs in these areas.

All gazetted airsheds, except one, have been gazetted for the purpose of managing PM₁₀. The exception is the Marsden Point airshed which is gazetted solely for the management of sulphur dioxide (SO₂). Thirty-seven airsheds are continuously monitored for PM₁₀. The majority of the remaining airsheds are not monitored because they are not likely to exceed the PM₁₀ standard. This is in accordance with the Regulations which only require monitoring in areas where the standard is likely to be exceeded.

Generally, these gazetted airsheds are very close to the strict science-based definition of an airshed (ie, a geographical area within which air pollution can be retained for an extended period). However, regional councils can group together areas with similar meteorological and emission characteristics for management purposes and to minimise monitoring costs. Otago Regional Council used this approach in 2005 when it gazetted four airsheds that each contained a number of geographically separate towns and cities (eg, Otago Airshed 1 includes Arrowtown, Alexandra, Clyde, Cromwell, Naseby, Ranfurly and Roxburgh).

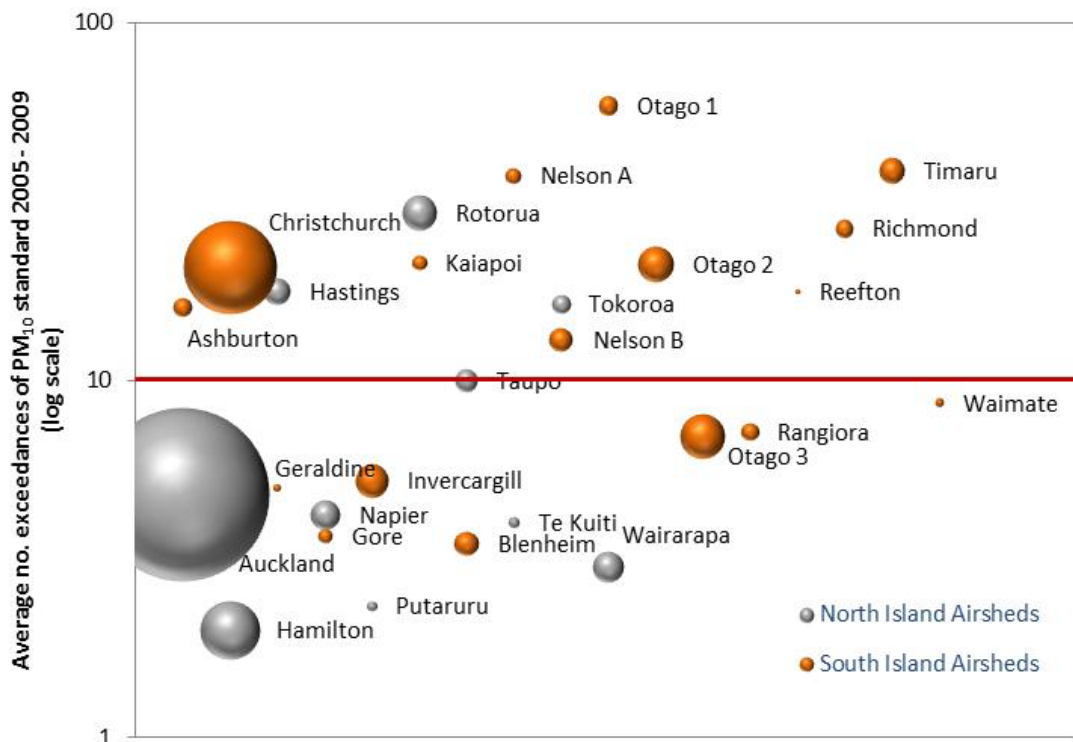
Maps of gazetted airsheds can be viewed on the Ministry website at www.mfe.govt.nz.

2.2.2 What is the current state of air quality?

The Regulations were promulgated in 2004 with the intent of compliance with the ambient PM₁₀ standard by 2013. However, in September 2010, the Ministry estimated that there would be 15 airsheds (representing around 44 per cent of New Zealand’s population) which would likely not comply with the PM₁₀ standard by 2013. Notably, the airsheds include Auckland which represents nearly 30 per cent of New Zealand’s population (and 55 per cent of those living in non-complying airsheds).

Figure 5 shows the number of people exposed to poor air quality in currently non-complying airsheds, based on monitoring data from 2005 to 2009. The frequency of pollution (annual number of exceedances averaged over five years) is shown on the y-axis and the population exposure (airshed population) by the size of the bubble. Airsheds at the top of the graph are more heavily polluted than those shown below the red line. Note the ambient PM₁₀ standard requires all airsheds to achieve no more than one exceedance in any 12-month period.

Figure 5: Air quality in currently non-complying airsheds, 2005-2009



From 1 September 2011, the Regulations require all airsheds with more than 10 exceedances (averaged over 5 years) to achieve 3 or fewer by 2016 and 1 or fewer by 2020. Those airsheds below 10 exceedances but above 1 will have to achieve 1 by 2016. All others (those with 1 or fewer exceedances) will have to achieve no more than 1 exceedance with immediate effect.

3 What?: The Legislative and Policy Context for Air Quality Management

This chapter sets out the legislative and policy context for achieving compliance with the PM₁₀ standard. The key legislation for managing air quality in New Zealand is the Resource Management Act 1991 (RMA) and the Resource Management (National Environmental Standards for Air Quality) Regulations 2004, (the Regulations).

3.1 Roles and responsibilities for air quality management in New Zealand

Figure 6 summarises the legislative and policy framework for air quality management in New Zealand.

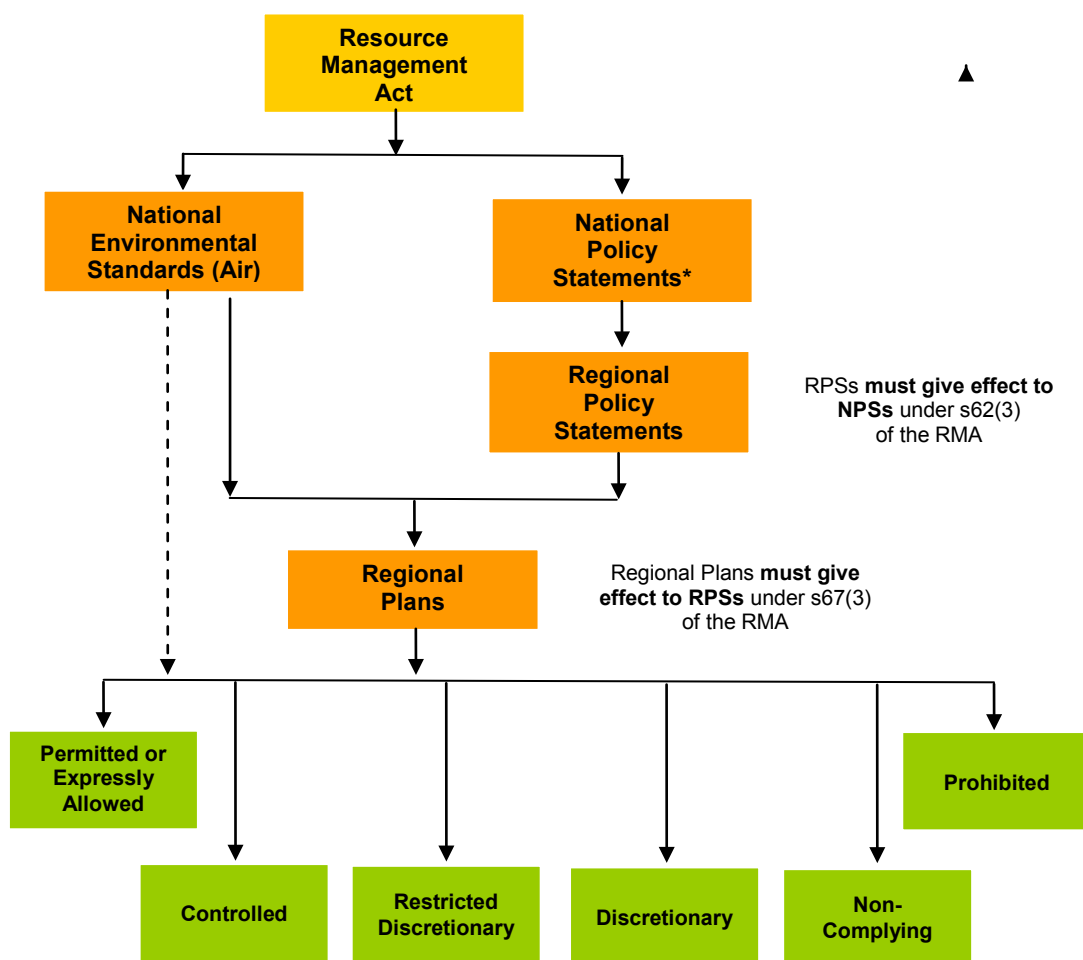
3.1.1 Regional councils and unitary authorities

Regional councils and unitary authorities have the primary responsibility for managing air quality under the RMA. Regional councils have a duty to ensure that the national air quality standards are met within their regions.

Regional councils can utilise several different mechanisms to meet the requirements of the RMA and the national air quality standards. They can develop regional plans (to establish policies and rules) to manage particular issues in their regions, process applications for resource consents for discharges (particularly from industrial and trade premises), carry out education campaigns and provide incentives for people to use cleaner forms of home heating.

Regional plans (or ‘air plans’) address specific air quality issues for each region. They outline the objectives and policies for air quality and may contain rules about discharges to air from activities such as industry, domestic fires and vehicles. Preparing regional plans involves several stages and this is fully set out in the First Schedule of the RMA (ie, Plan Preparation). Public participation and communication with iwi, industry groups, environmental and special user groups, and the local community is important. This consultation promotes understanding of the air quality issues and enables ‘buy in’ of the plan’s response to them.

Figure 6: Legislative and policy framework for air quality management in New Zealand



* The only one currently affecting air quality management is the NZCPS

Key	
Central Government responsibility	
Regional Council responsibility to enforce	
Types of activities which discharge to air	

3.1.2 Territorial authorities

Territorial Authorities (TAs) do not have a specific air quality management function under the RMA but have the primary responsibility for land use (eg, the location of activities that may discharge contaminants to air). The TA functions are set out in section 31 of the RMA.

However, TAs are able to make bylaws under the Local Government Act 2002. Section 145 states:

145 General bylaw-making power for territorial authorities

A territorial authority may make bylaws for its district for 1 or more of the following purposes:

- (a) protecting the public from nuisance:*
- (b) protecting, promoting, and maintaining public health and safety:*
- (c) minimising the potential for offensive behaviour in public places.*

This could include bylaws regarding air quality in terms of (b) above.

As an example, Rotorua District Council, in collaboration with the Bay of Plenty Regional Council, has developed the Air Quality Control Bylaw 2010 to safeguard Rotorua's air quality. The bylaw requires that:

- Only approved¹⁰ woodburners and pellet fires can be installed in the Rotorua Airshed.
- From 1 May 2012 (when the Point of Sale Rule comes into effect), an owner of a house cannot sell it with a working open fire or non-compliant burner.
- From 1 May 2015 (when the Open Fire Rule comes into effect) there will be a ban on using indoor open fires.

TAs also issue consents under the Building Act relating to (amongst other things) domestic fires. They need to ensure these are compliant with the national air quality standards.

A good working relationship between regional councils and their constituent TAs can significantly assist in effectively and efficiently addressing air quality issues.

3.1.3 The Ministry for the Environment

The Ministry for the Environment provides national guidance, in terms of the RMA, for regional councils and unitary authorities to manage the air in their regions. This guidance includes ambient air quality guidelines, good practice guidance, research and reporting, and assistance with public education campaigns.

An important role of the Ministry is to assist councils to meet the national air quality standards. This is achieved by providing information on woodburners (including the national authorised list), clean and efficient forms of home heating, collating national monitoring information, and through air@mfe.govt.nz, providing help and advice to regional councils.

3.2 The Resource Management Act 1991

The RMA's purpose is to promote the sustainable management of natural and physical resources (section 5). The RMA is the fundamental piece of legislation that sets the framework for air quality management in New Zealand.

The following is an overview of the relevant provisions of the RMA relating to air quality and discharges, including:

¹⁰ Either listed on the Ministry for the Environment's current National List of Authorised Wood Burners or Pellet Burner List or can be demonstrated to comply with the design and thermal efficiency standards in the Regulations.

- the Act’s presumption regarding air quality management
- the management framework for air quality (national environmental standards and regional planning provisions).

3.2.1 Presumption in the Act regarding air quality management

Section 15 - **Discharge of contaminants into the environment**¹¹ - is an important section. In summary, section 15(1) states that *no person may discharge any—*

(c) contaminant from any industrial or trade premises into air...

unless that discharge is expressly allowed by a **national environmental standard** or other regulations, a **rule in a regional plan** (as well as in a proposed regional plan), or by a **resource consent**. In other words, air discharges are not permitted unless they are specifically authorised.

Section 15(2) states that no person may discharge a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a **national environmental standard** unless the discharge—

(a) is expressly allowed by other regulations; or

(b) is expressly allowed by a resource consent; or

(c) is an activity allowed by section 20A (existing use).

Similarly, section 15(2A) states that no person may discharge a contaminant into the air, or into or onto land, in a manner that contravenes a **regional rule** unless the discharge—

(a) is expressly allowed by a national environmental standard or other regulations; or

(b) is expressly allowed by a resource consent; or

(c) is an activity allowed by section 20A (existing use).

In respect of sections 15(2) and (2A), the opposite presumption to section 15(1) applies, ie, the discharge is allowed provided it does not contravene a standard or a rule.

3.2.2 Overall management framework for air quality

Part 5 of the RMA sets out the provisions relating to standards, policy statements and plans.

National environmental standards

Section 43 - **Regulations prescribing national environmental standards** - sets out that (by Order in Council) regulations (known as national environmental standards) can prescribe technical standards, methods, or requirements relating to (amongst other things) air quality, including standards, methods, or requirements for monitoring.

¹¹ It is important to read and understand section 15 of the Act as it is a fundamental provision relating to air quality and how discharges to the environment are ‘controlled’.

The regulations may include:

- (a) qualitative or quantitative standards:
- (b) standards for any discharge or the ambient environment:
- (c) methods for classifying a natural or physical resource:
- (d) methods, processes, or technology to implement standards:
- (e) exemptions from standards:
- (f) transitional provisions for standards, methods, or requirements.

Section 43B - **Relationship between national environmental standards and rules or consents** - is relevant as it enables a rule in a regional plan or resource consent to be more stringent than a national environmental standard provided the standard expressly says that a rule or consent may be more stringent than it. However it is important to note that a rule or resource consent cannot be more lenient than a national environmental standard.

In the case of the air quality standards, regulation 28 – **More stringent rule, resource consent, or bylaw prevails** - specifically states that *a rule, resource consent, or bylaw that is more stringent than these regulations prevails over the regulations* and therefore rules or consents relating to air quality can be more stringent than the standards. This is because the air quality standards only set a guaranteed **minimum** level of protection.

Section 44A - **Local authority recognition of national environmental standards** is also important, and should be read and understood in its entirety. In summary, if a regional plan (or proposed plan) duplicates or is in conflict with a provision in the national environment standard, then the council must amend its plan (without having to use the Schedule 1 process) to be in accordance with the specification in the standard. Clause (2) states that a rule conflicts with a provision if—

- (a) *both of the following apply:*
 - (i) *the rule is more stringent than the provision in that it prohibits or restricts an activity that the provision permits or authorises; and*
 - (ii) *the standard does not expressly say that a rule may be more stringent than it; or*
- (b) *the rule is more lenient than the provision.*

Sections 44A(7) and 44A(8) **require local authorities to observe national environmental standards and enforce them** to the extent which their powers enable them to do so. **This means that both regional councils** who have the primary responsibility for air quality management **and territorial authorities** that have functions that impact on air quality must observe and enforce the air quality standards.

Regional policy statements and regional plans

The **purpose of a regional policy statement (RPS)**, set out in section 59, is:

To achieve the purpose of the Act by providing an overview of the resource management issues of the region and policies and methods to achieve integrated management of the natural and physical resources of the whole region.

A RPS is a mandatory document (section 60) and may provide policy guidance with respect to the management of air quality. A regional plan (if one is prepared) must “give effect” to the

provisions of the RPS (section 67 (3)) and therefore if the RPS addresses air quality, any regional (or district) plan must give effect to its provisions.

The **purpose of a regional plan**, set out in section 63, is:

To assist a regional council to carry out any of its functions in order to achieve the purpose of this Act.

Section 65 states that a regional council **may** prepare a regional plan (other than a regional coastal plan which is mandatory) for the whole or part of its region for any of its functions under the Act.

In terms of air quality management it is the combination of the national environmental standards for air quality, regional policy statements and regional air plans (including resource consents processed in terms of the regional plans) that provide the statutory resource management framework for the management of air quality.

All regional councils have an RPS and regional plans that control air discharges. Some councils have regional plans specifically for air quality ('air plans'), while others incorporate air quality issues into broader based 'natural resource management plans' dealing with land, air and water quality and quantity issues. Air plans detail regional and/or local (airshed-specific) management of air quality.

Regional plans (including air plans) are different for each region. They reflect different local circumstances. Plans can and do (and are specifically able to under the air quality standards) contain more stringent provisions than exist in the standard. One of the justifications for this is to allow adequate time for regional councils to respond if air quality is approaching unacceptable levels. The regional council process to develop and implement policy for emissions reductions can take several years and one of the ways that councils can address this is by adopting 'target' values that are typically 66 per cent of the relevant standard value. This helps to provide certainty that the air quality standards are not breached.

3.3 National environmental standards for air quality

National environmental standards are mandatory technical environmental regulations. They have the force of regulation and are implemented mainly by regional councils.

3.3.1 The original regulations

In October 2004, the Government introduced air quality standards in the Resource Management (National Environmental Standards for Air Quality) 2004. The air quality standards were prepared in accordance with sections 43 and 44 of the RMA.

They included:

- seven **standards** banning activities that discharge significant quantities of dioxins and other toxics into the air

- five **ambient air quality standards** for carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM₁₀), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and ozone (O₃)
- a **design standard** for new woodburners installed in urban areas
- a requirement for landfills over 1 million tonnes of refuse to collect greenhouse gas emissions.

The ambient standards are the minimum requirements that outdoor air quality should meet in order to guarantee a set level of protection for human health and the environment. The phrase ‘set level of protection’ is used quite deliberately – it does not mean that all adverse health impacts will be avoided. This is because some pollutants (eg, PM₁₀) do not have a ‘safe’ threshold under which no adverse health impacts are experienced.

The ambient standards are a subset of the ambient air quality guidelines which set the minimum requirements that outdoor air quality should meet for a range of air pollutants in order to protect human health and the environment (MfE, 2002). Most of the guideline values adopted in New Zealand have been taken from guidance provided by overseas organisations such as the World Health Organisation (WHO, 2006).

3.3.2 Subsequent amendments

The Regulations were subsequently amended in December 2004 (SR 2004/433), July 2005 (SR 2005/214) and November 2008 (SR 2008/375). These amendments were largely made for technical reasons.

3.3.3 The revised Regulations

The Minister for the Environment Hon Dr Nick Smith announced a review of the air quality regulations in 2009. This review focussed on the ambient air quality standards, particularly the provisions for PM₁₀. Three potential problems were identified with the PM₁₀ standard:

- perceived stringency of the standard
- equity of current regulations
- compliance with the standard by 2013.

Perceived stringency of the standard

The World Health Organisation (WHO) guideline for PM₁₀ is 50 µg/m³ as a 24-hour average, with three permitted exceedances per year. Different countries have adopted different standards; while many adopt the target of 50 µg/m³, there is a range of permitted exceedances, and some provide for the exclusion of ‘exceptional events’ from the count of exceedances. There was concern that the New Zealand standard, allowing for only one exceedance and with no provision for ‘exceptional events’, might be too stringent.

Equity of current regulations

The original regulations imposed restrictions on the issuing of resource consents in breaching airsheds, and the burden of these restrictions fall on industry, which require consents. The

problem is that domestic solid-fuel consumption, not industry, is the primary source of PM₁₀ pollution during winter. As a consequence, the regulations were not considered equitable.

Compliance with the current standard by 2013

In 2004, when the air quality standards were put in place, it was expected that all airsheds would comply with the PM₁₀ standard by 2013. However, by late 2009, the Ministry estimated that there would be 15 airsheds which would not comply in time, including Auckland, which represents nearly 30 per cent of New Zealand's population. There was concern that the 2013 deadline was unachievable.

In response, the air quality standards were amended in April 2011 with the main changes being:

- extending the target date for regional councils to meet the ambient PM₁₀ standard with compliance set at 1 September 2016 (for polluted airsheds) and 1 September 2020 (for heavily polluted airsheds)
- making provision for the exclusion of exceptional events (eg, dust storms, volcanic eruptions)
- requiring offsets from certain new industries with PM₁₀ discharges in polluted airsheds from September 2012, replacing the current restrictions on industrial consents
- prohibiting new solid-fuel burning open fires in homes in polluted airsheds from September 2012.

4. How?: The Toolkit of Compliance Options

The Ministry for the Environment is promoting a toolkit of “compliance activities” to assist regional councils to meet the ambient PM₁₀ standard. This Compliance Strategy adopts a graduated approach, with activities ranging from education, assisted compliance, advice, reporting and review through to action.

A graduated approach recognises that barriers to compliance may be different in different regions due to local variations in physical, social, political and economic factors. The Minister for the Environment has stated that compliance with the Regulations will best be met by developing effective “*local solutions for local problems*”. However, in keeping with the government’s commitment to “*better Regulation, less Regulation*”, some of the ‘solution mechanisms’ required may be more efficiently handled through central government legislation rather than local government regulation, eg, regional planning documents.

This chapter discusses each of these compliance activities in detail, outlining definitions, key components and responsibilities.

Although this Compliance Strategy focuses on options for meeting the ambient PM₁₀ 24-hour standard, the generic principles outlined could be applied to achieving compliance with other air quality standards in future.

4.1 Background

4.1.1 What do we mean by compliance?

The word “compliance” means different things to different people, depending on which end of the “regulatory spectrum” they find themselves. Compliance usually refers to a range of activities carried out by central and local government that have regulatory functions. The purpose of carrying out compliance is to ensure that people and organisations adhere to rules and regulations.

In the case of meeting the ambient PM₁₀ standard, the public good outcome is clean healthy air for all New Zealanders.

In practice, compliance with the PM₁₀ standard will need to occur at multiple levels. Councils are required to comply with the standard and will need to develop action plans for improving air quality in polluted airsheds. While councils will be reporting to the Ministry on their progress in terms of the programmes and rules they are able to implement in their regions, they will also be reporting to their communities to achieve compliance uptake at the community level. In turn, communities and stakeholders will need to comply with any rules, conditions and bylaws set by their councils in order to achieve the PM₁₀ standard.

4.1.2 What are the requirements to be met?

The key requirements from the Regulations that need to be met or noted by councils are summarised in table 1. These requirements are discussed in detail in this chapter. A full list of all critical implementation steps is also provided in chapter 5.

Table 1: Summary of critical milestones arising from the Regulations

Date	Item
1 June 2011	Exceedances for exceptional circumstances can be considered
1 September 2011	Split targets for permissible exceedances come into effect
1 September 2011	When next breach occurs, ban on new open fires in that airshed to be notified for 12 months hence
1 September 2012	Determine polluted airshed status
1 September 2012	Offset for new industry comes into effect
2 September 2012	Earliest date new open fires can be banned after notifying 12 months previously
1 September 2013	Annual reviews of compliance progress commence (eg, provision of annual monitoring data, airshed action plans, progress reports)
1 May 2014	Annual compliance reporting by the Ministry for the Environment commences
1 September 2016	All airsheds achieve three or fewer permissible exceedances
1 September 2020	All airsheds achieve one or fewer permissible exceedances
1 September 2025	All airsheds have five years compliance, so no polluted airsheds and no need for industry offsets

Councils are encouraged to achieve compliance earlier than the timing indicated.

4.1.3 What does compliance success look like?

Meeting the ambient PM₁₀ standards as outlined in the Regulations will result in considerable benefits, both direct and indirect, to New Zealand.

The primary direct benefit will be reductions in adverse health effects caused by PM₁₀ pollution. The cost-benefit analysis undertaken for the review of the Regulations estimates that meeting the ambient PM₁₀ standard will result in a net benefit to New Zealand of \$1.55 billion, over the period 2008 to 2020 (MfE, 2010). The bulk of this net figure is a \$1.75 billion saving in health costs for an outlay of \$0.20 billion in additional costs. The health benefits come from reduced premature mortality and considerably fewer hospital admissions and restricted activity days.

Actions taken to reduce PM₁₀ exposure will also result in other benefits as follows:

- health benefits from reduced exposure to other air pollutants emitted from the same sources targeted for PM₁₀ reductions
- health benefits from warmer, drier, healthier homes resulting from the installation of cleaner more efficient appliances combined with improved insulation
- reduced heating energy costs and reduced winter peak electricity demand
- reduced greenhouse gas emissions.

However, **it must be recognised that there is no safe threshold for PM₁₀** and councils should continue to work towards minimising long term health effects beyond the minimum required to meet the current regulations.

4.1.4 What are the options for ensuring compliance?

The options available to assist councils to achieve the ambient PM₁₀ standard have been evaluated and collated into general response categories resulting in a toolkit of graduated responses. A graduated approach recognises that **barriers to compliance may be different in different regions** due to local variations in physical, social, political and economic factors. These responses are based on the principles outlined in *Achieving Compliance: A Guide for Compliance Agencies in New Zealand* (Standards NZ, 2011).

Figure 7 presents the response categories used in the Compliance Strategy, ranging from education through to enforcement action. It is expected that the initial effort will go into items shown at the bottom of the pyramid but then be elevated, if needed, to ensure timely compliance. Having a toolkit of graduated responses enables councils and the Ministry for the Environment to respond in a way that is proportionate to the risk posed by non-compliance and move up and down the pyramid as required.

The compliance toolkit presents the full range of options available to ensure compliance. Some of these are **optional**, many councils already provide comprehensive information to their communities on the health effects of air pollution and therefore may not derive any additional benefit from using the new health effects factsheet produced by the Ministry for the Environment. However, other options are **mandatory**, all councils must ensure that new industry offsets in polluted airsheds beyond 1 September 2012.

Figure 7: The response categories in the compliance toolkit



The intent is that councils review the options presented in detail in the next sections and adopt or note those that will assist them to meet the ambient PM₁₀ standard.

4.2 Education

Definition

Education in this section refers to activities that develop and support **understanding** of why compliance with the PM₁₀ standard is important and what compliance will mean for various stakeholders, eg, councils and communities.

Components and Responsibilities

The Compliance Strategy includes the following education components:

- the revised regulations
- the 2011 Users' Guide
- a factsheet on health effects of PM₁₀ air pollution.

All of these components are the responsibility of the **Ministry for the Environment** but are intended to be used to assist **councils** to develop their own local education initiatives, if required.

Recommended actions for councils to take relating to education are listed at the end of this section.

4.2.1 The revised regulations

The revised regulations address **what** needs to be met.

The revised regulations - Resource Management (National Environmental Standards for Air Quality) Regulations 2004¹² (including the 2011 amendments) – came into force in June 2011 and are administered by the **Ministry for the Environment**. They include regulations for:

- prohibitions and restrictions on discharges from certain activities
- ambient air quality standards for contaminants
- resource consents for discharges of PM₁₀ and other contaminants
- design and thermal efficiency standards for woodburners
- prohibitions for discharges from new domestic solid-fuel burning open fires
- control of greenhouse gas emissions at landfills.

With regards to PM₁₀, the Regulations:

- require councils to monitor if it is likely that the ambient PM₁₀ standard will be breached in an airshed (Regulation 15)
- require councils to give public notice if the ambient PM₁₀ standard is breached in an airshed (Regulation 16)
- allow councils to apply for an exceedance to be deemed due to exceptional circumstances and therefore not count towards the number of permissible exceedances (Regulation 16A)

¹² Available from www.legislation.govt.nz.

- allow councils to have split targets for the number of permissible exceedances in an airshed (Regulation 16B) based on meaningful data (Regulation 16C) and average exceedances (Regulation 16D)
- require councils to decline resource consent applications for certain PM₁₀ discharges in polluted airsheds unless the discharges are offset (Regulation 17)
- require councils to prohibit discharges from woodburners installed on certain properties (Regulation 22) unless the woodburner meets a particular design standard (Regulation 23) and meets a particular thermal efficiency standard (Regulation 24)
- require councils to prohibit discharges from certain domestic solid-fuel burning open fires 12 months after an airshed is breached (Regulation 24A)
- allow councils to have a more stringent rule, resource consent and bylaw than the Regulations (Regulation 28).

4.2.2 The 2011 Users' Guide

The 2011 Users' Guide addresses **how** the Regulations are to be applied.

Guidance on the implementation of the Regulations in their entirety (including prohibited activity standards relating to emissions of toxic air contaminants, control of greenhouse gas emission at landfills and other ambient air quality standards) is contained in the Users' Guide (MfE, 2011a).

The Users' Guide has been prepared by the **Ministry for the Environment** and is intended to outline how to implement the Regulations rather than how to achieve compliance. It is suited to a more technical audience but is seen as a critical 'companion' document to the Compliance Strategy.

4.2.3 The factsheet on health effects of air pollution

The factsheet on health effects of air pollution addresses **why** compliance with the Regulations is important.

A stand-alone factsheet on health impacts of PM₁₀ has been produced by the **Ministry for the Environment** (MfE, 2011b). The factsheet contains the latest information on the health impacts of PM₁₀ and covers:

- What is PM₁₀?
- Where does PM₁₀ come from?
- What are the health effects resulting from PM₁₀ exposure?
- Who is most affected?
- What are the recommended guidelines and standards?
- What is the current state of PM₁₀ in New Zealand?
- What are the current health impacts of PM₁₀ exposure in New Zealand?

It is intended as a useful reference for the Ministry and councils to use in their publications, particularly those for the wider public including politicians, community groups, and industry.

Key points from the factsheet have been incorporated into both the Compliance Strategy and the Users' Guide.

4.2.4 Recommendations for councils regarding education

Recommended actions for **councils** to take relating to education include:

- notifying the public and key stakeholders (particularly industry) that the Regulations have changed and providing advanced warning that additional prohibitions or requirements are likely for polluted airsheds in their regions (they should already know which ones these are)
- preparing supporting material on the health effects and the requirements of the Regulations to secure political and community 'buy in' for:
 - approving amendments to rules, resource consents, bylaws and policy documents
 - providing funding for any actions that may need to be taken
- educating the public and key stakeholders on the content of the Regulations, how they will be implemented regionally (eg, offsets), and why it is important that the Regulations are met.

Note **all of the above recommendations are optional**. However, the Ministry for the Environment views education as a critical component of any council's strategy to meet the ambient PM₁₀ standard.

4.3 Assisted compliance

Definition

Assisted compliance refers to activities that address generic needs of regional councils to achieve the PM₁₀ standard, in particular those which are outside the jurisdiction of councils and/or are better addressed by central government agencies.

Components and Responsibilities

The Compliance Strategy includes the following assisted compliance components:

- the requirement for mandatory offsets of significant new industrial emissions in polluted airsheds
- the woodburner design and thermal efficiency standards
- the ban on new domestic solid-fuel open fires in polluted airsheds
- WarmUp New Zealand: Heat Smart funding
- vehicle emission legislation.

All of these components are the responsibility of **central government agencies** and are current as at the date of the release of the Compliance Strategy. Given that the compliance process is expected to take up to nine years from 1 September 2011, other opportunities for assisted compliance are likely to arise in future. As a consequence, **this Strategy advocates regular reviews of progress by both the Ministry for the Environment and the councils to identify**

any situations where central government providing assisted compliance would be more efficient and effective.

Recommended actions for councils to take relating to assisted compliance are listed at the end of this section.

4.3.1 Mandatory offset requirement

Mandatory offsets for industry are a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 17 requires councils to decline resource consent applications for certain PM₁₀ discharges in polluted airsheds unless the discharges are offset by the same or greater amount. This regulation is intended to ensure that the state of a degraded airshed does not get any worse as a result of a new discharge and offers the opportunity for councils to mitigate emissions from other sources, such as older domestic fires or older school buses.

Regulation 17 comes into force on or from 1 September 2012 and applies to resource consent applications to discharge PM₁₀ in polluted airsheds where the applications:

- are for new discharges and increases in existing discharges and
- would be likely to increase the 24-hour concentration of PM₁₀ by more than 2.5 µg/m³ beyond the site of the discharge.

An airshed becomes polluted on and from 1 September 2012 if it has meaningful PM₁₀ data (Regulation 16C) and average exceedances (Regulation 16D) of more than 1 per year. An airshed stops being a polluted airshed on or from any day if the PM₁₀ standard has not been breached at any time in the immediately prior 5-year period.

Detailed information on the interpretation of the regulations that apply to mandatory offsets is available in the Users' Guide (MfE, 2011a).

4.3.2 Woodburner design and efficiency standards

Woodburner design and efficiency standards are a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 22 requires councils to prohibit discharges of particles to air from woodburners installed on certain properties unless the woodburner meets particular design and thermal efficiency standards. This regulation is intended to mitigate emissions from woodburners as older more polluting appliances will be replaced with cleaner alternatives.

Regulation 22 came into force after 1 September 2005 and requires woodburners installed on properties less than 2 hectares in size to emit no more than 1.5 gram of particles for every kilogram of dry wood burnt (Regulation 23) and achieve a thermal efficiency standard of no less than 65% (Regulation 24).

Detailed information on the interpretation of the regulations that apply to the woodburner design and efficiency standards is available in the Users' Guide (MfE, 2011a).

The Ministry for the Environment hosts a list of burners on their website at www.mfe.govt.nz that have been tested and authorised by Environment Canterbury and/or Nelson City Council.

4.3.3 Ban on new solid-fuel open fires

Banning new domestic solid-fuel burning open fires in breaching airsheds is a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 24A requires councils to prohibit discharges of particles to air from domestic solid-fuel burning open fires installed 12 months after the date of the first breach of the ambient PM₁₀ standard which occurs on or after 1 September 2011. This regulation is intended to ensure that the state of a degraded airshed does not get any worse as a result of a new discharge and encourages the public to opt for cleaner more efficient domestic heating options.

Councils are required to give public notice of the pending ban the first time the standard is breached in their airsheds on or from 1 September 2011. This notice must specify the date of the ban (12 months after the first breach) and be given at least 6 months before the date of the ban. The delay is deliberate to give councils sufficient time to apply and be granted a decision on whether the exceedance was caused by exceptional circumstances and can therefore be ignored.

Regulation 24A comes into force on or from 2 September 2012¹³ and once invoked the prohibition lasts in perpetuity.

Detailed information on the interpretation of the regulations that apply to the prohibition of new open fires is available in the Users' Guide (MfE, 2011a).

4.3.4 WarmUp New Zealand: Heat Smart funding

The Government has allocated \$347 million to retrofit at least 188,500 homes over four years from July 2009, with insulation and clean efficient heaters, such as high-efficiency heat pumps and efficient gas heaters.

This programme is administered by the **Energy Efficiency and Conservation Authority** (EECA) and offers subsidies of:

- up to \$1,300 for installing ceiling and under floor insulation
- up to \$1,200 for a clean, efficient heating system.

On 11 May 2011, the scheme celebrated its 100,000th home to be retrofitted¹⁴ and many of the retrofits to date have been in the worst polluted airsheds (thereby accelerating turnover of older more polluting woodburners).

Many councils offer their ratepayers the option to pay off the costs (excluding the subsidies) through “targeted rates schemes”. At time of writing, such schemes were in place for eight councils - The Auckland Council, Greater Wellington Regional Council, the Marlborough

¹³ The earliest date that the first breach can occur is 1 September 2011 for airsheds which already have 1 or more exceedances in the prior 12-month period. Because the ban comes into force 12 months after, 12 full months must elapse before the ban takes effect and therefore it cannot start any earlier than 2 September 2012.

¹⁴ See www.beehive.govt.nz

District Council, Tasman District Council, Hawke's Bay Regional Council, Nelson City Council, Environment Canterbury and the Chatham Island Council.

4.3.5 Vehicle emission legislation

Vehicle emissions are regulated through:

- land transport rules for vehicle exhaust emissions (administered by **Ministry of Transport**)
- engine fuel specifications regulations (administered by the **Ministry of Economic Development**)
- urban bus requirements (administered by the **NZ Transport Agency**).

Land Transport Rule for Vehicle Exhaust Emissions 2007¹⁵ aims to progressively improve the emissions standards of vehicles entering the New Zealand fleet by:

- requiring newly imported vehicles (used and new) to have been manufactured to progressively increasing new emissions standards
- requiring used imported vehicles entering the fleet to undertake a metered emissions test to ensure they continue to meet the emissions standards to which they were manufactured
- undertaking a visible smoke test at Warrant of Fitness or Certificate of Fitness inspection to identify badly polluting vehicles
- prohibiting the removal of, or tampering with, emissions control technology on vehicles registered in New Zealand.

The Land Transport Rule was amended in 2010 and currently requires Euro 5 for new heavy diesel vehicles and Euro 4 for new or used light petrol and diesel vehicles by 1 January 2015 at the latest.

The Land Transport Rule works in concert with the Engine Fuel Specifications Regulations 2008¹⁶ which prescribe different specifications for petrol, diesel, biodiesel, and ethanol that is supplied for use as engine fuel. Exhaust emission standards usually require particular fuel specifications in order to be achieved. New Zealand is yet to make a decision on the timing of the introduction of zero sulphur petrol because of regional fuel supply concerns. Zero sulphur petrol would enable improving the emissions standard requirements for petrol vehicles to Euro 5 in the Vehicle Exhaust Emissions Rule.

Requirements for urban buses have been set by the NZ Transport Agency since 2008. These requirements have been reviewed recently and are about to become the common standard for urban bus quality across New Zealand¹⁷. The standard will require all buses entering the national urban fleet to be no older than 20 years maximum with a fleet average age of 12.5 years in 2012 reducing to 10.0 years in 2017. Buses entering the fleet will be required to meet current emissions standards set in the Vehicle Exhaust Emission Rule but existing buses will have to meet Euro 2 minimum or be retrofitted with particulate filters.

¹⁵ Available from www.nzta.govt.nz.

¹⁶ Available from www.legislation.govt.nz

¹⁷ Available from www.nzta.govt.nz

4.3.6 Recommendations for councils regarding assisted compliance

Recommended actions for **councils** to take relating to assisted compliance include:

- implementing the mandatory offset regulation in their region in polluted airsheds on or from 1 September 2012
- implementing the woodburner design and thermal efficiency standards
- implementing the ban on new open fire installations in breaching airsheds on or from 2 September 2012
- offering a targeted rates schemes to their ratepayers to take advantage of funding programmes, such as WarmUp New Zealand: Heat Smart or equivalent
- reviewing the barriers to achieving compliance in their airsheds and requesting assistance where national intervention and legislation is justified.

Note the first three recommendations are mandatory whilst the others are optional.

4.4 Advice

Definition

Advice refers to activities that provide best or good practice guidance for better air quality management in New Zealand.

Components and Responsibilities

The Compliance Strategy includes the following advice components:

- existing air quality management guidance (including a review of currency)
- new guidance on managing domestic fire emissions
- funding research on improving air quality management practices in New Zealand.

All of these are the responsibility of **central government agencies**.

Recommended actions for councils to take relating to advice are listed at the end of this section.

4.4.1 Existing good practice guidance

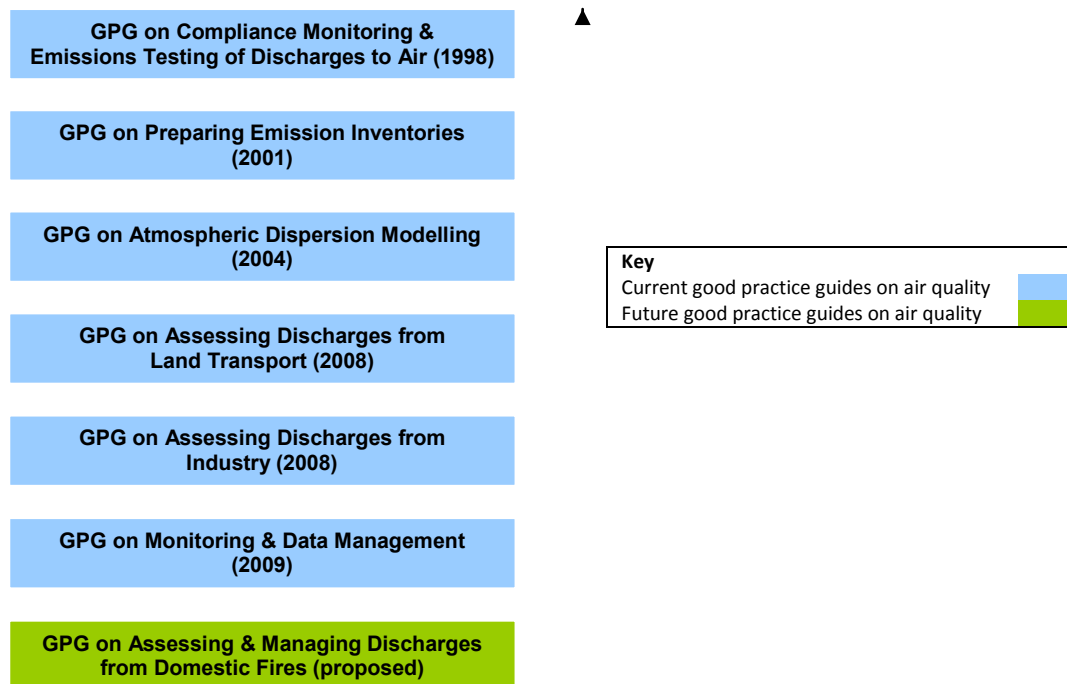
The **Ministry for the Environment** has a comprehensive array of existing good practice guidance available to assist with air quality management in New Zealand as shown in figure 8¹⁸.

As part of the Compliance Strategy development, the existing good practice guidance was reviewed to evaluate its currency for assisting councils to meet the national air quality standards (MfE, 2011c). On balance, much of the existing guidance is still relevant. However, critical sections need to be updated (particularly for the older documents) and there are key knowledge

¹⁸ The Ministry has also published good practice guides on assessing and managing the effects of dust (MfE, 2001a) and odour (MfE, 2003) but these are not shown in figure 8 as they are not directly related to meeting the Regulations.

gaps that need to be addressed to reflect the new requirements from the legislation and developments in international best practice.

Figure 8: Good practice guidance for improved air quality management in New Zealand



The review of existing good practice is intended to be used as a scoping document which the Ministry can use to prioritise its future work programme and includes a section outlining a suggested table of contents for a new Good Practice Guide on Assessing and Managing Emissions from Domestic Fires (discussed in the next section).

The quality planning website also provides guidance on writing air quality plans at www.qualityplanning.org.nz.

4.4.2 New guidance on managing domestic fire emissions

When announcing the revised Regulations, the Minister signalled that the regulatory changes would be supported by a suite of non-regulatory tools (Minister for the Environment, 2011). One of these tools was to be the production by the **Ministry for the Environment** of additional best practice guidance on air quality management.

Best practice examples of air quality management from councils across New Zealand have been identified through the development of the Compliance Strategy. The list includes:

- Nelson City Council’s Good Wood Scheme
- Tasman District Council’s point of sale rule for clean woodburners

- Environment Canterbury’s Clean Heat programme
- Auckland Council’s Domestic Fire Emission Prediction Model and scenario analyses
- Waikato Regional Council’s annual monitoring report
- Bay of Plenty Regional Council’s smoky vehicle rule
- Rotorua District Council and Bay of Plenty Regional Council’s Air Quality Control bylaw.

The additional best practice guidance could be centred on Air Quality Management in general but may be more appropriately focused on Assessing and Managing Emissions from Domestic Fires to complement the guides already existing for land transport and for industry. Opting for the latter would mean that guidance would then be available for managing each of the major sources that significantly impact PM₁₀ levels in New Zealand.

Figure 8 shows how this proposed good practice guide would complement existing guidance.

4.4.3 Funding research on improving air quality management

The **Ministry of Science and Innovation** (MSI) is tasked with directing knowledge and technology transfer from the science and innovation sector to businesses and other research users. MSI currently funds the Healthy Urban Atmospheres (HUA) air quality research programme¹⁹, which comprises researchers from NIWA, Landcare Research, University of Canterbury, Environet and Golder Associates.

The HUA programme has four research streams within the programme - ambient air, exposure and effects in different microenvironments, emission sources, and integration – and will provide measurements and tools for successful air quality management in New Zealand’s cities.

The first three research streams are focussed on science research questions in their respective areas, while the integration stream examines air quality in a broader context. In particular, the work examines the inter-relationship between science information on air quality, factors that influence air quality and its effects, and the policy and regulatory decision-making that influences air quality.

This research stream is seeking to increase engagement with regulators and policy makers who work in policy development and/or other areas that directly influence air quality, such as landuse and transport planning.

4.4.4 Recommendations for councils regarding advice

Recommended actions for **councils** to take relating to advice include:

- applying the existing good practice guidance in their approaches to managing air quality in their airsheds
- feeding back to the Ministry for the Environment any gaps or issues that need to be addressed in future good practice guidance
- liaising closely with air quality researchers to deliver improvements in air quality management practices in New Zealand

¹⁹ This 8-year research programme commenced in October 2008.

- developing local guidance, as needed, to encourage more consistent implementation of the Regulations and relevant rules and policies in their regions
- providing direction to key stakeholders, such as industry, on critical rules and policies, eg, regional criteria for offsets.

Note **all of the above recommendations are optional**. However, the Ministry for the Environment views the application of good practice as a critical component of any council's strategy to meet the ambient PM₁₀ standard.

4.5 Reporting

Definition

Reporting refers to activities undertaken by councils to other parties, such as their local community or the Ministry for the Environment, about the state of air quality in their airsheds.

Components and Responsibilities

The Compliance Strategy includes the following reporting components:

- reporting of breaches
- reporting of meaningful data
- reporting of pending ban on new open fires
- reporting of progress against airshed action plans.

All of these components are the responsibility of **councils**. Some of them are mandatory requirements contained in the Regulations and others are voluntary but could be required by the Minister for the Environment under section 27 of the RMA.

Recommended actions for councils to take relating to reporting are listed at the end of this section.

4.5.1 Breaches

Mandatory reporting of breaches is a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 16 requires councils to give public notice if the ambient air quality standard for any contaminant is breached in any airshed in their regions.

From 1 June 2011, councils may apply to the Minister for the Environment to be granted a decision on whether the exceedance was caused by exceptional circumstances and therefore can be ignored (Regulation 16A). Guidance on how to apply to the Minister to have an exceedance re-classified is available on the Ministry for the Environment website at www.mfe.govt.nz.

Detailed information on the interpretation of the regulations that apply to reporting of breaches, including an example of a public notice of a breach, is available in the Users' Guide (MfE, 2011a).

4.5.2 Meaningful data

Having meaningful data is a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 16C requires airsheds to have meaningful PM₁₀ data (Regulation 16C) for the purposes of allowing split targets for permissible exceedances (Regulation 16B(2)), calculating an airshed's average annual exceedances (Regulation 16D(2)) and for the definition of polluted airshed status (Regulation 17(4)) which switches the offset requirement on and off. Meaningful data is also required to confirm compliance with the ambient PM₁₀ standard.

The Ministry for the Environment produces an annual report card on PM₁₀ based on data supplied by the councils. Although *having* meaningful data is mandatory in the Regulations, *reporting* meaningful data is not. However, under section 27 of the RMA, the Minister may make a mandatory request for provision of this monitoring data. Appendix 1.1 includes an example letter that the Minister might send to a council should they not provide this information voluntarily.

Detailed information on the interpretation of the regulations that apply to meaningful data, including advice on how to calculate this for multiple monitoring sites in an airshed, is available in the Users' Guide (MfE, 2011a).

4.5.3 Pending ban on new solid-fuel open fires

Mandatory notification of the pending ban on new domestic solid-fuel burning open fires in breaching airsheds is a requirement of the Regulations (administered by the **Ministry for the Environment**).

Regulation 24A requires councils to give public notice of the pending ban the first time the standard is breached in their airsheds on or from 1 September 2011. This notice must specify the date of the ban (12 months after the first breach) and be given at least 6 months before the date of the ban. The delay is deliberate to give councils sufficient time to apply and be granted a decision on whether the exceedance was caused by exceptional circumstances and can therefore be ignored.

Detailed information on the interpretation of the regulations that apply to the notifying the pending prohibition of new open fires is available in the Users' Guide (MfE, 2011a).

4.5.4 Progress towards compliance

The Ministry for the Environment intends to commence reviewing council monitoring data and airshed implementation progress reports from 1 September 2013.

Reporting on progress toward achieving compliance is not a mandatory requirement of the Regulations. However, under section 27 of the RMA, the Minister may make a mandatory request for provision of a progress report to monitor whether councils are on track to meet their targets. Appendix 1.2 includes an example letter that the Minister might send to a council should they not provide this information voluntarily.

Councils can use this information (in its entirety or as a subset) to report regularly on progress to their communities.

4.5.5 Recommendations for councils on reporting

Recommended actions for councils to take relating to reporting include:

- publicly notifying all breaches of the ambient standards, including those being considered as due to exceptional circumstances
- providing meaningful data and average annual exceedances to the Ministry for the Environment on request
- publicly notifying a pending ban on new open fires in breaching airsheds
- providing reports to the Ministry for the Environment on their progress towards implementing and meeting the ambient PM₁₀ standard
- reporting regularly to their communities on their progress towards meeting the ambient PM₁₀ standard.

Note **the first four recommendations are either mandatory under the Regulations or can be mandatorily required by the Minister under the RMA.** The Ministry for the Environment encourages councils to report regularly to their communities as way to secure buy in for what must be done to deliver clean healthy air in their regions.

4.6 Review

Definition

Review refers to activities undertaken by both councils and the Ministry for the Environment to examine or assess progress with the intention of identifying additional actions needed to meet the PM₁₀ standard.

Components and Responsibilities

The Compliance Strategy includes the following review components:

- regional plan reviews by councils to ensure consistency with the revised Regulations
- annual compliance review by the Ministry for the Environment to formally assess progress and by councils to meet the PM₁₀ standard council monitoring data and airshed implementation progress reports.

Responsibilities for these components are **split between councils and the Ministry for the Environment.**

Recommended actions for councils to take relating to review are listed at the end of this section.

4.6.1 Regional plan reviews

Given that national environmental standards for air quality were first promulgated in 2004, all regional plans should have been consistent with the original Regulations prior to the amendments being announced in January 2011.

The revised Regulations have revoked a number of the original Regulations including those regarding straight line or curved line paths. However, the new Regulations do not prohibit these tools still being used, especially as they may prove invaluable in the development of airshed action plans.

Regardless, councils should take the opportunity to review their regional plans for consistency with the revised Regulations as soon as possible and aim to have their reviews completed no later than 31 August 2012 in order to be prepared for any mandatory items that come into effect from 1 September 2012.

As outlined previously in Chapter 3, section 44A(5) of the RMA requires regional plans to remove any rules that are more lenient than, or in conflict with, national environmental standards.

Following the review for consistency, councils may need to review their regional plans to incorporate new regulations (eg. banning new open fires²⁰) as and when they are triggered.

4.6.2 Annual compliance reviews

The **Ministry for the Environment** intends to commence annual compliance reviewing from 1 September 2013.

The annual reviews will use council monitoring data and airshed implementation progress reports to assess how councils are progressing towards meeting the ambient PM₁₀ standard, taking into consideration their individual targets for permissible exceedances and any airshed action plans.

At the same time, **councils** may take the opportunity to conduct their own annual reviews to establish whether action plans are required for their airsheds in the first place, whether current policies or strategies are being effective and whether their plans need to be strengthened over time (action plans are covered in the next section).

The Ministry for the Environment will investigate the reasons for any failure to implement the standard effectively and establish whether additional support in the way of education, assisted compliance, or advice is needed from central government to assist councils to meet the PM₁₀ standard.

These annual compliance reviews may be used as a trigger for intervention by the **Minister for the Environment** (see Chapter 6). Under section 24A of the RMA, the Minister may commence an investigation of the performance of any non-complying councils.

4.6.3 Recommendations for councils regarding review

Recommended actions for councils to take relating to review include:

- undertaking a review of their regional plans as soon as possible to ensure consistency with the revised regulations and then incorporate any new requirements, as and when they may be triggered

²⁰ This would apply in cases where a regional plan allows new open fires or has a looser requirement than the Regulations, such as requiring new open fires to meet an emission limit rather than prohibiting them outright.

- conducting their own annual compliance reviews to establish whether action plans are required for their airsheds in the first place and then whether they need to be strengthened over time.

Note **the first recommendation is mandatory under RMA but the second is optional but strongly recommended** by the Ministry for the Environment.

4.7 Action

Definition

Action refers to activities undertaken by both councils and the Ministry for the Environment to address potential non-compliance in meeting the PM₁₀ standard, if necessary.

Components and Responsibilities

The Compliance Strategy includes the following action:

- development of action plans for non-compliant airsheds
- public compliance reporting to celebrate success and encourage improvement.

Responsibilities for these components are **split between councils and the Ministry for the Environment**.

Recommended activities for councils relating to action are listed at the end of this section.

4.7.1 Development of airshed action plans

Developing action plans for non-complying airsheds is not a mandatory requirement of the Regulations. However, under section 27 of the RMA, the Minister may make a mandatory request for provision of an airshed action plan to monitor whether councils are on track to meet their targets. Appendix 1.3 includes an example letter that the Minister might send to a council should they not provide this information voluntarily.

A number of the gazetted airsheds are known or likely to exceed the PM₁₀ standard. **Councils** are encouraged to consider developing airshed action plans as soon as possible to move towards compliance with the ambient PM₁₀ standard. Airshed action plans may also be prepared for areas that do not breach the ambient standards – to ensure that this remains the case. An airshed action plan is not a legal requirement of the Regulations, rather it is a strategy to achieve compliance.

Many councils have already developed action plans in accordance with the recommendations of the Users' Guide prepared when the national air quality standards were first developed. These may need to be updated to take account of the revised Regulations.

An effective air quality management framework is shown in table 2. Any airshed action plan needs to address these key elements to successfully (and efficiently) target problem emissions.

It is recommended that airshed action plans be prepared in a transparent manner so that affected parties, which include the general public and industry, are informed and able to participate. This

does not mean however, that full consultation as defined under the RMA is necessary – such decisions are at the discretion of the council.

Table 2: Elements of an air quality management framework

Element	Details
Ambient air quality standards	Based on health and environmental indicators. Provided by national environmental standards. Augmented by national ambient air quality guidelines and ambient targets specified in regional plans.
Monitoring networks	Must include both air quality and meteorology. Additional monitoring to that required for the purposes of the national environmental standards may be necessary.
Emission inventories	Emissions quantified by source and location..
Predictive models	Validated numerical prediction tools to calculate spatial, short and long term impacts. Models are used to estimate projections for emissions inventories and the dispersion characteristics of an airshed to ultimately provide the comprehensive understanding of the airshed that is so necessary for determining action.
Regulatory instruments	Regulations, regional plans, bylaws, incentives, etc.
Communication	System to give information to public on air quality. Includes reporting requirements under national environmental standards.
Strategy	Policies and measures to ensure ambient standards are achieved and maintained, eg, regional plans, airshed action plan.

Source: Adapted from Elsom, 2004.

The preparation of an airshed action plan may be broken into the following five steps.

Step 1. Assess current state

The first step in preparing an airshed action plan is to know what you know and equally important – to know what you don't know.

By considering each of the essential air quality framework elements listed in table 2, consider what information may be needed.

- What are the ambient standards to achieve?
 - Note: national environmental standards and regional plan ambient air quality targets/goals may also include national ambient air quality guidelines.
- What data is available on:
 - air quality (pollutant monitoring)
 - meteorology (meteorological monitoring)
 - topography
 - emissions (source, profile)
 - dispersion characteristics
 - population exposure (location, demographics, mortality and morbidity, health effects, costs)?
- What are the limitations of the data?
- What is the data showing us (current/historical trends)?
- Does this ring true (ie, is the data validated)?

Depending upon the size and complexity of the airshed it may not be necessary to have accurate and complete information on all data listed above but it will be vital to have enough to provide a comprehensive understanding. The key issues are:

- whether or not the air quality meets the ambient standards
- the link between emissions and ambient levels
 - eg, 1,000 kg/day of PM₁₀ equates to a 10-year maximum of 75 µg/m³ PM₁₀ as a 24-hour average under worst-case meteorological conditions²¹
- profile of key sources
 - eg, of the 1,000 kg/day of PM₁₀, 700 kg/day comes from home heating in winter and are spread evenly over the western, northern and southern areas of the airshed
- estimated impacts for the airshed
 - eg, western and northern suburbs are estimated to have the highest exposure
- important sensitive or peak impacts in the airshed.
 - eg, central business district east is known to have a ‘canyon effect’ during morning and evening rush hour.

One of the critical data needs is information on the number and location of domestic heating appliances. This information is more usually collated by territorial authorities (TAs) rather than regional council, because TAs issue building consents under the Building Act for domestic fires. Regional councils are encouraged to develop a good working relationship with their local TAs. However, should difficulties arise in obtaining information, regional councils could apply to the Minister to make a mandatory request, under section 27 of the RMA, for provision of domestic solid-fuel appliance records. Appendix 1.4 includes an example letter that the Minister might send to a TA should they not provide this information voluntarily.

Step 2. Project into the future

Once a council has determined the state of ambient air quality at present, it is then possible to estimate the state of ambient air quality in the future.

Before predicting what would happen to air quality by a particular target date, it is important to establish a ‘do-nothing’ or status-quo approach. This base case should incorporate the following:

- impact of prohibited activity standards (if any)
- impact of design standard for new woodburners
- impact of the prohibition on new solid-fuel burning open fires
- impact of mandatory offsets
- improvements expected as a result of national fuel specification regulations
- improvements expected as a result of national vehicle emission control regulations
- improvements expected as a result of regional regulatory requirements

²¹ All examples are purely hypothetical.

eg, regional air plan rules, regional policy statements, regional land transport strategies

- known changes in industrial developments
eg, existing resource consent applications
- projected changes in population.

Only once the base case scenario has been established can we determine (based on the existing air quality and the anticipated changes expected from a do-nothing approach) what is necessary to meet the PM₁₀ standard. Alternatively, if the existing air quality already meets the ambient standards, what is necessary to ensure that the ambient standards continue to be met.

This will vary for each council but it is already known that in the majority of urban areas in New Zealand the primary source is domestic home heating so it is likely that this is where the majority of efforts will be focused.

Step 3. Identify and prioritise

Using the information gathered above it will then be necessary to identify and then prioritise policies or strategies to improve air quality in that particular airshed. It is likely that careful attention will need to be given to the costs and/or benefits of imposing new regional policies as typically the pay-back takes months or years to be seen.

Priorities will be influenced by:

- impact
eg, the amount of emission reduction or projected improvement
- feasibility and robustness
ie, the likelihood of policy/regulatory approach succeeding and the accuracy of projected improvement
- cost
- benefits
- resources
- equity – economic/social impacts
eg, impacts on low income households
- fairness and/or parity
ie, the fairness of targeting all sectors
- external influences.
eg, security of supply of energy, particularly in relation to domestic home heating.

Prioritising involves balancing between what is necessary and what actually can be done.

Effective air quality management incorporates a variety of options beyond the resource consent process. In particular, links to district planning (integrating land use and transport), public transport, workplace travel plans and clean-industry opportunities offer valuable potential for emissions reductions.

Step 4. Action

This step is the most critical – the doing – and involves implementing in practice what the action plan has outlined. Most likely this will be a combination of regulatory and non-regulatory tools not unlike what is outlined in the Compliance Strategy, eg, education, advice etc.

Step 5. Review

As with any system or strategy, provision for review is crucial. It is recommended that councils monitor the effectiveness of their airshed action plans and review direction and implementation at least every year and modify their plans accordingly to ensure compliance is achieved thereby minimising health effects in their regions.

4.7.2 Public compliance reporting

The **Ministry for the Environment** intends to publish an annual report showing the compliance status for all airsheds from 1 May 2014.

The report will celebrate success of those councils who are progressing ahead of schedule and highlight those who are lagging behind. The report will be made publicly available and councils will be encouraged to adopt the best practice of high-performing councils.

4.7.3 Recommendations for councils regarding action

Recommended actions for councils to take relating to action include:

- developing action plans for non-complying or potentially non-complying airsheds to ensure health effects are minimised in their regions as soon as practicable.

Note this is optional but it strongly recommended by the Ministry and can be required by the Minister under the RMA.

5. When?: Upcoming Milestones

This chapter presents the key dates for the implementation of the Regulations. It then outlines future work being considered by the Ministry for the Environment to assist councils to deliver clean healthy air for New Zealanders.

5.1 Timeline for critical implementation steps

Table 3 provides a timeline summarising the critical steps involved in implementing and complying with the ambient PM₁₀ standard. This table also highlights who is responsible for delivering each item.

Dark orange denotes mandatory actions (ie, from the regulations)

Medium orange denotes recommended actions for councils

Light orange denotes actions undertaken by the Ministry

Table 3: Timeline for critical dates in complying with the PM₁₀ standard

Date	Item	Action By Whom
1 June 2011	Exceedances caused by exceptional circumstances can be considered by the Minister	Councils can apply for consideration of an exceptional circumstance within three months of the exceedance
		The Minister to provide written notice of his/her decision within three months of the application and instigate a public register for all applications
2 August 2011	Guidance on the revised air quality standards to be provided via: <ul style="list-style-type: none"> The Compliance Strategy 2011 Users' Guide 	Ministry for the Environment releases in August 2011
1 September 2011	Split targets for permissible exceedances come into effect from this date	Councils to ensure they have meaningful PM ₁₀ data and up to 5-year average exceedances to justify permissible exceedances above immediate compliance
		Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data to confirm compliance
	Review of regional plans underway	Councils to start reviewing their regional plans to ensure they are consistent with the revised regulations These reviews should be completed no later than 31 August 2012 to help councils prepare for the mandatory items that come into effect from 1 September 2012
2 September 2011	Earliest date that the ban on discharges from new open fires installed in breaching airsheds can be notified	Councils to give public notice of the upcoming ban upon first breach, irrespective of the number of permissible exceedances This notice must be given at least 6 months in advance of the date of the ban and the ban must commence 12 months after the first breach

Date	Item	Action By Whom
1 September 2012	Polluted airshed status comes into effect from this date ²	<p>Councils to ensure they have meaningful PM₁₀ data and up to 5-year average exceedances to determine whether an airshed is polluted (based on more than 1.0 on average)</p> <p>Once invoked, "polluted" status lasts until five consecutive years of no breaches achieved</p> <p>Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data</p>
	Requirement for offsets for new industry in polluted airsheds comes into effect from this date	<p>Councils to ensure that relevant industry offset their PM₁₀ emissions for the duration of their consents</p> <p>Once invoked, the offset requirement lasts until five consecutive years of no breaches achieved</p>
2 September 2012	Earliest date that ban on discharges from new open fires installed in breaching airsheds can come into effect	<p>Councils to enforce ban 12 months after first breach occurred</p> <p>Once invoked, the ban lasts in perpetuity</p>
1 September 2013	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		<p>Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data to confirm compliance</p> <p>For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their permissible exceedances targets</p>
1 May 2014	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2014	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		<p>Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data</p> <p>For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets</p>
1 May 2015	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2015	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		<p>Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data</p> <p>For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets</p>

Date	Item	Action By Whom
1 May 2016	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2016	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets
	All airsheds to meet three or fewer permissible exceedances per 12-month period from this date	Eligible councils to achieve no more than three permissible exceedances per rolling 12-month period from this date All other councils to achieve no more than one permissible exceedance Under s24A of the RMA, the Minister may commence an investigation of the performance of any non-complying councils
1 May 2017	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2017	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets
1 May 2018	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2018	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets
1 May 2019	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds

Date	Item	Action By Whom
1 September 2019	Progress on compliance to be reviewed	Councils to report back to Ministry on monitoring data and progress towards their targets
		The Ministry to review council monitoring data and airshed implementation progress reports
		Under s27 of the RMA, the Minister may make a request for mandatory provision of this monitoring data to confirm compliance For polluted airsheds, the Minister may also make a request for mandatory provision of an airshed action plan and/or a progress report to monitor whether councils are on track to meet their targets
1 May 2020	Report on compliance status to be released	The Ministry to publish a report showing the compliance status of all airsheds
1 September 2020	All airsheds to meet one or fewer permissible exceedances	All councils to achieve no more than one permissible exceedances per rolling 12-month period from this date
		Under s24A of the RMA, the Minister may commence an investigation of the performance of any non-complying councils
1 September 2025	Requirement for offsets for new significant industry in polluted airsheds ceases	All councils to have achieved five years of no breaches and therefore should no longer have any "polluted" airsheds" in New Zealand

Notes:

1. Councils are encouraged to achieve compliance earlier than the timing indicated
2. None of the other reporting requirements/recommendations shown supersede the mandatory requirement for councils to publicly report all breaches of the ambient standards (Regulation 16), which applies irrespective of the number or timing of permissible exceedances.

5.2 Proposed future work by the Ministry

On 29 January 2011, the Minister for the Environment, Hon Dr Nick Smith, announced the outcomes of a review of the national air quality standards. In addition to a series of amendments to the Regulations, the Minister signalled in his Cabinet Paper that the regulatory changes would be supported by a suite of non-regulatory tools (Minister for the Environment, 2011) as follows:

- preparation of a national compliance strategy
- production of additional best practice guidance on air quality management

5.2.1 Outputs from the Compliance Strategy development

The national air quality compliance strategy has been developed to monitor progress of strategies for reducing air pollution. The original intent was to include education on the health impacts of PM₁₀, review existing best practice guidance and replace the Users' Guide prepared for the original regulations.

However, as part of preparing the Compliance Strategy, the 2011 Users' Guide has been separated out to reflect the different content and the different intended audiences of the two documents as follows:

- the *Compliance Strategy* which sets out the practices that regional councils should adopt to meet the ambient PM₁₀ standard suited to a wide audience
- the *2011 Users' Guide* which provides an explanation of how best to implement the air quality regulations suited to a more technical audience.

A stand-alone *Factsheet on Health Impacts of PM₁₀* has also been produced.

The Health Impacts Factsheet contains the latest information on the health impacts of PM₁₀ and is intended as a useful reference for the Ministry and councils to use in their publications, including educational material for the wider public (MfE, 2011b). Key points from the factsheet have been incorporated into both the Compliance Strategy and the Users' Guide.

6. What If?: Airsheds Fail to Meet the PM₁₀ Standard

This chapter sets out the intervention options available to the Minister to ensure compliance with the ambient PM₁₀ standard.

The Minister wants councils to meet their obligation under the Regulations and intervention is viewed as a last resort. Nevertheless, it is very important for the health of all New Zealanders that all regions attain the PM₁₀ standard in the given timeframes. Delaying meeting the standard has significant health implications.

In reflecting the Minister's position, the Ministry's preference is to work with the councils to ensure they meet the PM₁₀ standard. However, in the event that a council fails to show reasonable progress in implementing the standard, the Minister and Ministry have a number of options available to them. These options are discussed in the following sections.

6.1 Powers of the Minister for the Environment

Under the RMA, the Minister has the power to monitor the effectiveness and implementation of national environmental standards. In addition, the Minister can investigate the performance of councils.

Section 24 of the RMA - **Functions of Minister for the Environment** - sets out the Minister's functions, and these include (of particular relevance to air quality):

- (a) the recommendation of the issue of national policy statements*
- (b) the recommendation of the making of national environmental standards*
- (f) the monitoring of the effect and implementation of this Act (including any regulations in force under it) ...*
- (ga) the monitoring and investigation of any matter ... of environmental significance*

Section 24A - **Power of Minister for the Environment to investigate and make recommendations** - empowers the Minister to investigate the performance of councils with regards to their functions, powers and duties, and to make recommendations to councils based on that investigation. This power is a broad one enabling the Minister to not only investigate the exercise or performance by the local authority of any of its functions, powers, or duties, but also any failure or omissions in exercising or performing those functions. It also enables the Minister to take action (sections 25, 25A, and 25B) if he or she considers there are relevant grounds for intervention (see later).

Under section 25 - **Residual powers of Minister for the Environment** - if the Minister considers that a local authority is not appropriately exercising or performing its functions, powers, or duties (including not giving effect to the national environmental standards for air quality), the Minister may appoint 'commissioners' (one or more people) to exercise or perform all or any of the council's functions, powers, or duties, in place of the council. In seeking to use these powers certain pre-conditions must all be satisfied, and these include:

- Written notice must be given to the council specifying the reasons for the proposed intervention.
- The council must be given a reasonable opportunity to satisfy the Minister that it has not failed to exercise or perform its functions, powers, or duties to the extent necessary to achieve the purpose of this Act.
- The council, having not been able to convince the Minister in terms of its performance, must also fail to take proper steps to remedy the issues or faults raised within a specified time (being not less than 20 working days).

The costs, charges, and expenses incurred by the Minister in relation to any intervention/review are recoverable from the local authority.

Although the Minister has these powers, exercising them is a very serious step and a serious indictment on a council. Consequently, these powers are intended to be used sparingly and require strong justification for intervention. An example of their use to date is the appointment of temporary commissioners to replace the councillors at Environment Canterbury in March 2010.

Sections 25A and 25B - **Minister may direct preparation of plan, change, or variation or direct commencement of a review** - give the Minister the power to direct a council to prepare a regional plan, or a change or variation to an existing operative or proposed plan to address a resource management issue (eg, relating to air quality). In doing so the Minister must, in giving a direction, specify a reasonable period within which the plan, change, or variation must be notified.

Section 27 - **Minister may require local authorities to supply information** – gives the Minister the authority to require the council to supply information that is held by the council and is “*reasonably be required by the Minister*”. Any request must be in writing and can relate to the council’s exercise of any its functions, powers, or duties under this Act.

These powers available to the Minister are expected to be used infrequently. However, councils will need to continue to consciously address their air quality management functions under the RMA should they wish to avoid scrutiny and possible intervention by the Minister.

The Minister can also request that his or her department (the Ministry for the Environment) offer to assist or provide advice to a council.

6.2 Intervention by the Minister

The statutory powers of the Minister to intervene have been set out in the previous section. For the Minister to intervene would mean that there were serious breaches or concerns about the actions or inactions of a Council. The Minister would not intervene lightly and would only do so if he or she considered the situation/events were so serious that intervention was warranted and that all other reasonable options had been exhausted.

While no criteria exist to help guide the Minister’s decision-making on whether or not to intervene (using any or all of the powers at his or her disposal), any intervention would need to be based on sound advice from the Ministry and information sought from the Council and any other relevant ‘stakeholders’. Possible situations where intervention could occur are:

- requiring mandatory reporting of monitoring data and progress by councils which do not voluntarily provide this information following the annual Ministry request (discussed in section 4.5.2, section 4.5.3, Appendix 1.1 and Appendix 1.2)
- requiring the mandatory development of airshed action plans by councils which do not voluntarily provide this information following the annual Ministry request (discussed in section 4.7.1 and Appendix 1.3).

The key questions for the Minister to consider before intervening could include:

- What management actions are being applied by the council?
 - eg, supporting targeted rates, promoting good wood schemes, enforcing point of sale rules
- Do these management actions represent best practice?
- Are these management actions achieving actual air quality improvements?
- Are the ambient PM₁₀ concentrations reducing fast enough to meet the required airshed compliance date?
- How serious are the health effects?
 - eg, how many people are being exposed
- Are the management actions sufficient based on the risk of not achieving the permitted levels of exceedances?
 - eg, the Minister could recommend action if there is a low risk that levels will not be achieved, or be directive if there is a high risk.

Glossary

12-month period	rolling consecutive 12 month period
24-hour average	average calculated for a 24-hour period (midnight to midnight)
acute	short term exposure, eg, 1-hour
airshed	an area designated by a regional council for the purposes of managing air quality and gazetted by the Minister
breach	any exceedance of any ambient standard which occurs above the number of allowable exceedances in a running 12-month defined in Schedule 1 of the Regulations
breaching airshed	an airshed that has recorded a breach of any ambient standard in the Regulations. In this Strategy, the term applies to the PM ₁₀ standard.
chronic	long term exposure, eg, annual
CO	carbon monoxide
compliance	a range of activities usually carried out by agencies with regulatory functions to ensure people and other organisations adhere to rules and regulations for the public good. In this Strategy, the public good is reduced adverse health effects from improved air quality.
domestic fire	a solid-fuel heating appliance which is intended primarily to heat a residential dwelling
EECA	Energy Efficiency and Conservation Authority
exceedance	an instance where a contaminant exceeds its threshold concentration (defined in Schedule 1 of the Regulations) in an airshed
gazetted airsheds	part of a region of a regional council specified by the Minister by notice in the <i>Gazette</i> to be a separate airshed
GPG	good practice guide
HAPINZ	Health and Air Pollution in New Zealand study
HUA	Healthy Urban Atmospheres research programme led by NIWA and funded by MSI
kg	kilogram
LGA	Local Government Act 2002
MfE	Ministry for the Environment
m	metre
mg	milligram, one thousandth of a gram

mg/m³	milligram per cubic metre, a unit of concentration
Minister	Minister for the Environment
morbidity effects	adverse health effects which result in increased illness, suffering and general unwellness
mortality effects	adverse health effects which result in death
MoT	Ministry of Transport
MSI	Ministry of Science and Innovation
New Zealand Gazette	the official newspaper of the Government of New Zealand, produced by the Department of Internal Affairs
NIWA	National Institute for Water and Atmospheric Research Ltd
NO	nitric oxide
NO₂	nitrogen dioxide
NO_x	oxides of nitrogen (which include NO and NO ₂ but there are others)
O₃	ozone
PM	particulate matter
PM_{2.5}	particulate matter less than 2.5 µm in diameter, sometimes referred to as ‘fine’ particulate matter
PM₁₀	particulate matter less than 10 µm in diameter, includes ‘fine’ particulate (less than 2.5 µm) and ‘coarse’ particulate (2.5 to-10 µm)
polluted airshed	an airshed that with more than 1.0 average annual exceedances for the immediately prior 5-year period, calculated from meaningful data for up to 5-years of monitoring data
RMA	Resource Management Act 1991
SO₂	sulphur dioxide
solid fuel	coal and wood (including wood pellets)
The PM₁₀ Standard	The ambient standard for maximum 24-hour average concentrations of PM ₁₀ measured anywhere a person can be reasonably exposed
The Regulations	Resource Management (National Environmental Standards for Air Quality) Regulations 2004, which includes the amendments made in 2004, 2005, 2008 and 2011
The Strategy	National Air Quality Compliance Strategy to Meet the PM ₁₀ Standard
The Users’ Guide	2011 Users’ Guide to the revised National Environmental Standard for Air Quality
µg	microgram, one millionth of a gram

$\mu\text{g}/\text{m}^3$	microgram per cubic metre, a unit of concentration
μm	micrometre, one millionth of a metre
woodburner	a domestic heating appliance that burns wood but which is not an open fire or a multifuel heater, a pellet heater or a coal burning heater or a cooking stove

References

Aphekom 2011. *Summary Report of the Aphekom Project 2008-2011*. Aphekom (Improving Knowledge and Communication for Decision Making on Air Pollution and Health in Europe) Project, Europe. Available from www.aphekom.org

Auckland Regional Council. 2010. *A Review and Update of HAPINZ for the Auckland Region*, Internal report no 2010/004 prepared by G Kuschel and K Mahon for the Auckland Regional Council, Auckland.

Elsom D. 2004. *Air Quality Management – Highlighting Good Practice*, Clean Air and Environmental Quality, Volume 38, No 1, Richmond, Victoria, Australia.

Fisher G, Rolfe K, Kjellstrom T, Woodward A, Hales S, Sturman A, Kingham S, Petersen J, Shrestha R and King D. 2002. *Health Effects due to Motor Vehicle Pollution in New Zealand*, Report to the Ministry of Transport. Available from www.hapinz.org.nz

Fisher G, Kjellstrom T, Kingham S, Hales S, Shrestha R et al. 2007. *Health and Air Pollution in New Zealand: Main Report*, Report prepared for the Health Research Council of New Zealand, Ministry for the Environment and Ministry of Transport, June 2007

Minister for the Environment. 2011. *Amending the PM₁₀ Air Quality Standards: Final Recommendations*, Cabinet Paper prepared by Hon Dr Nick Smith, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 1998. *Compliance Monitoring and Emission Testing of Discharges to Air*, Report prepared by the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2001a. *Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions*, Report ME408 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2001b. *Good Practice Guide for Preparing Emissions Inventories*, Report prepared by Environet for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2002. *Ambient Air Quality Guidelines*, Report ME437 prepared by the Ministry for the Environment and the Ministry of Health, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2003. *Good Practice Guide for Assessing and Managing Odour in New Zealand*, Report ME473 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2004. *Good Practice Guide for Atmospheric Dispersion Modelling*, Report ME522 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2007. *Environment New Zealand 2007*, Report ME847 published by the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2008a. *Good Practice Guide for Assessing Discharges to Air from Industry*, Report ME880 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2008b. *Good Practice Guide for Assessing Discharges to Air from Land Transport*, Report ME881 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2009. *Good Practice Guide for Air Quality Monitoring and Data Management*, Report ME933 prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2010. *Regulatory Impact Statement – Amending the PM₁₀ Air Quality Standards: Final Recommendations*, Prepared by Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2011a. *2011 Users' Guide to the revised National Environmental Standards for Air Quality*, Report prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Ministry for the Environment. 2011b. *Health Effects from PM₁₀ Air Pollution*, Factsheet prepared for the Ministry for the Environment, Wellington. Available from www.mfe.govt.nz

Standards NZ. 2011. *Achieving Compliance: A Guide for Compliance Agencies in New Zealand (Draft for Consultation)*, Wellington.

World Health Organisation. 2006. *Air Quality Guidelines Global Update 2005, Particulate matter, ozone, nitrogen dioxide and sulphur dioxide*, Prepared by World Health Organisation, Germany, Available from www.who.int.

Appendix 1: Examples of Information Requests issued under s27 of the RMA

This appendix provides various examples of letters the Minister for the Environment may send to local authorities requesting the supply of information related to monitoring the effects and implementation of the national air quality standards in their regions and the likelihood of meeting the ambient PM₁₀ standard.

Example letters are provided for:

- request to a regional council for ambient air quality monitoring data
- request to a regional council for a progress report on implementing the national air quality standards
- request to a regional council for an airshed action plan
- request to a territorial authority for information on the installation of domestic solid-fuel burning appliances in its area.

A1.1 Example request for monitoring data

[Chief Executive Officer]

[Regional Council]

[Address 1]

[Address 2]

[Address 3]

[Date]

Dear Sir / Madam,

National air quality standards – request for air quality monitoring data

Section 44A of the *Resource Management Act (RMA) 1991* requires local authorities and consent authorities to observe, and to enforce the observance of, national environmental standards. As you may be aware, the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* were amended in 2011. The amended regulations have new target compliance dates for polluted airsheds to comply with the standard for particulate matter less than 10 micrometres in diameter (PM₁₀). The new target dates are 1 September 2016 (polluted airsheds) and/or 1 September 2020 (highly polluted airsheds).

As Minister for the Environment, it is my responsibility to monitor the implementation of the national environmental standards for air quality in each region across New Zealand. I am advised by the Ministry for the Environment that the following airsheds exceed or are likely to exceed the ambient PM₁₀ standard in your region:

- [airshed name 1]
- [airshed name 2], etc.

Pursuant to Section 27 of the RMA, therefore, I am writing to request air quality monitoring data for the above airsheds.

The Regulations specifically require monitoring data to satisfy clauses relating to:

- Schedule 2 – the monitoring method employed
- Regulation 15(b)(i) – the site location (ie, where the PM₁₀ standard is likely to be breached the most often or by the greatest margin)
- Regulation 16B(2) – the number of allowable exceedances
- Regulation 16D(2) – the calculation of average exceedances and
- Regulation 17(4)(a)(i) – the definition of polluted airshed status, which in turn determines whether:
 - offsets are required for applications to consent authorities for certain discharges of PM₁₀ emissions from new industrial premises and/or
 - a regional council or unitary authority needs to publicly notify (and subsequently enforce) a ban on the discharge of PM₁₀ from open fires installed in their region.

Accordingly, for **each monitoring site** employed for the purposes of the Regulations in the airsheds listed above please provide and explain:

- the number and location of the PM₁₀ monitor with figure and/or map
- the monitoring method employed
- “meaningful PM₁₀ data” as defined by Regulation 16C(2) for the period *[insert date 1 to date 2 here]* inclusive and
- an assessment of how the monitoring represents:
 - best practice as outlined in the Ministry for the Environment’s *Good Practice Guide for Ambient Air Quality Monitoring and Data Management* (2009) and
 - the part of the airshed where the PM₁₀ standard is likely to be breached the most often or by the greatest margin.

Please also include relevant details of any meteorological monitoring undertaken to support ambient air quality monitoring for the purposes of the Regulations.

This information is required within 20 working days of the date of this letter, which will be close of business on *[insert due date here]*. If you are unable to meet this deadline, you may apply to me for an extension. Please address all correspondence, and/or any questions to *[insert contact name here]* at the Ministry for the Environment, ph *[insert phone no. and email here]*.

Thank you for your assistance with this matter. I look forward to working with you to meet the new target compliance dates and achieving clean air for all New Zealanders.

Yours sincerely,

Hon Dr Nick Smith
Minister for the Environment

A1.2 Example request for a progress report

[Chief Executive Officer]

[Regional Council]

[Address 1]

[Address 2]

[Address 3]

[Date]

Dear Sir / Madam,

National air quality standards – request for progress report(s)

Section 44A of the *Resource Management Act (RMA) 1991* requires local authorities and consent authorities to observe, and to enforce the observance of, national environmental standards. As you may be aware, the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* were amended in 2011. The amended regulations have new target compliance dates for polluted airsheds to comply with the standard for particulate matter less than 10 micrometres in diameter (PM₁₀). The new target dates are 1 September 2016 (polluted airsheds) and/or 1 September 2020 (highly polluted airsheds).

As Minister for the Environment, it is my responsibility to monitor the implementation of the national environmental standards for air quality in each region across New Zealand. I am advised by the Ministry for the Environment that the following airsheds exceed the ambient PM₁₀ standard in your region:

- *[airshed name 1]*
- *[airshed name 2], etc.*

Pursuant to Section 27 of the RMA, therefore, I am writing to request a progress report(s) on achieving compliance by the new target compliance date(s) for each of the above airshed(s). Please provide an explanation of how and when compliance will be achieved in each of the above airshed(s).

This information is required within 20 working days of the date of this letter, which will be close of business on *[insert due date here]*. If you are unable to meet this deadline, you may apply to me for an extension. Please address all correspondence, and/or any questions to *[insert contact name here]* at the Ministry for the Environment, at *[insert phone no. and email here]*.

Thank you for your assistance with this matter. I look forward to working with you to meet the new target compliance dates and achieving clean air for all New Zealanders.

Yours sincerely,

Hon Dr Nick Smith
Minister for the Environment

A1.3 Example request for an airshed action plan

[Chief Executive Officer]

[Regional Council]

[Address 1]

[Address 2]

[Address 3]

[Date]

Dear Sir / Madam,

National air quality standards – request for airshed action plan(s)

Section 44A of the *Resource Management Act (RMA) 1991* requires local authorities and consent authorities to observe, and to enforce the observance of, national environmental standards. As you may be aware, the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* were amended in 2011. The amended regulations have new target compliance dates for polluted airsheds to comply with the standard for particulate matter less than 10 micrometres in diameter (PM₁₀). The new target dates are 1 September 2016 (polluted airsheds) and/or 1 September 2020 (highly polluted airsheds).

As Minister for the Environment, it is my responsibility to monitor the implementation of the national environmental standards for air quality in each region across New Zealand. I am advised by the Ministry for the Environment that the following airsheds exceed the ambient PM₁₀ standard in your region:

- *[airshed name 1]*
- *[airshed name 2], etc.*

Pursuant to Section 27 of the RMA, therefore, I am writing to request a copy of your council's action plan(s) to achieve compliance by the new target compliance date(s) for each of the above airshed(s). Please also provide and explain your best estimate on when compliance will be achieved.

This information is required within 20 working days of the date of this letter, which will be close of business on *[insert due date here]*. If you are unable to meet this deadline, you may apply to me for an extension. Please address all correspondence, and/or any questions to *[insert contact name here]* at the Ministry for the Environment, at *[insert phone no. and email here]*.

Thank you for your assistance with this matter. I look forward to working with you to meet the new target compliance dates and achieving clean air for all New Zealanders.

Yours sincerely,

Hon Dr Nick Smith
Minister for the Environment

A1.4 Example request for domestic solid-fuel appliance information

[Chief Executive Officer]
[Territorial Authority]
[Address 1]
[Address 2]
[Address 3]

[Date]

Dear Sir / Madam,

National air quality standards – request for information

Section 44A of the *Resource Management Act (RMA) 1991* requires local authorities and consent authorities to observe, and to enforce the observance of, national environmental standards. As you may be aware, the *Resource Management (National Environmental Standards for Air Quality) Regulations 2004* were amended in 2011. The amended regulations have new target compliance dates for polluted airsheds to comply with the standard for particulate matter less than 10 micrometres in diameter (PM₁₀). The new target dates are 1 September 2016 (polluted airsheds) or 1 September 2020 (highly polluted airsheds).

As Minister for the Environment, it is my responsibility to monitor the implementation of the national environmental standards for air quality in each region across New Zealand. The Ministry for the Environment advises me that the following airsheds within your jurisdiction continue to exceed the PM₁₀ standard:

- *[airshed name 1]*
- *[airshed name 2] etc.*

I am further advised that these exceedances arise primarily as a result of emissions from domestic solid-fuel burning appliances during winter.

Pursuant to Section 27 of the Resource Management Act (RMA) 1991, therefore, I am writing to request for each of the above listed airsheds:

- information on the framework of measures currently in place relating to the installation and operation of woodburners since 1 September 2005 (when the national design standards for woodburners came into force)
- details of any financial measures, resources and/ or assistance in place to encourage the observance of the national environmental standards for air quality.

This information is required within 20 working days of the date of this letter, which will be close of business on *[insert due date here]*. If you are unable to meet this deadline, you may apply to me for an extension. Please address all correspondence, and/or any questions to *[insert contact name here]* at the Ministry for the Environment, at *[insert phone no. and email here]*.

Thank you for your assistance with this matter. I look forward to working with you to meet the new target compliance dates and achieving clean air for all New Zealanders.

Yours sincerely,

Hon Dr Nick Smith
Minister for the Environment