



Air Quality in Southland

Wood Energy South Launch – 30 October 2014



Overview of presentation

- **Are there air quality issues in Southland?**
- **If so, what causes them?**
- **What is Environment Southland doing to address them?**
- **Where to from here?**

Government Legislation

“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. ”

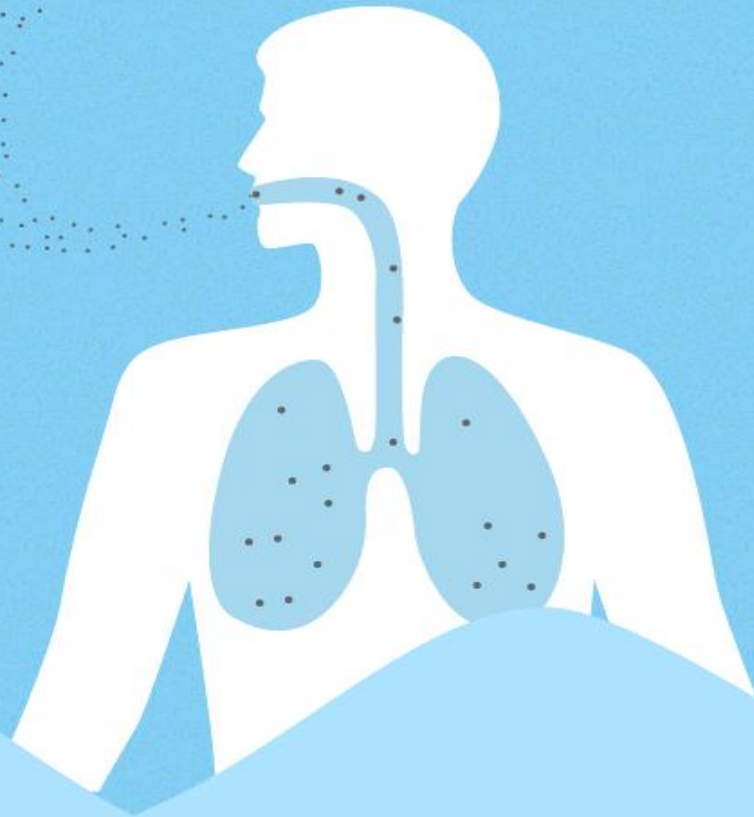
National Air Quality Compliance Strategy to Meet the PM₁₀ Standard

Health impacts

PM10

The main pollutant that is bad for us is called **PM10** and is so small we can't even see it.

In winter, PM10 reaches **very high levels.**



Key issue – Domestic heating

Invercargill

92%



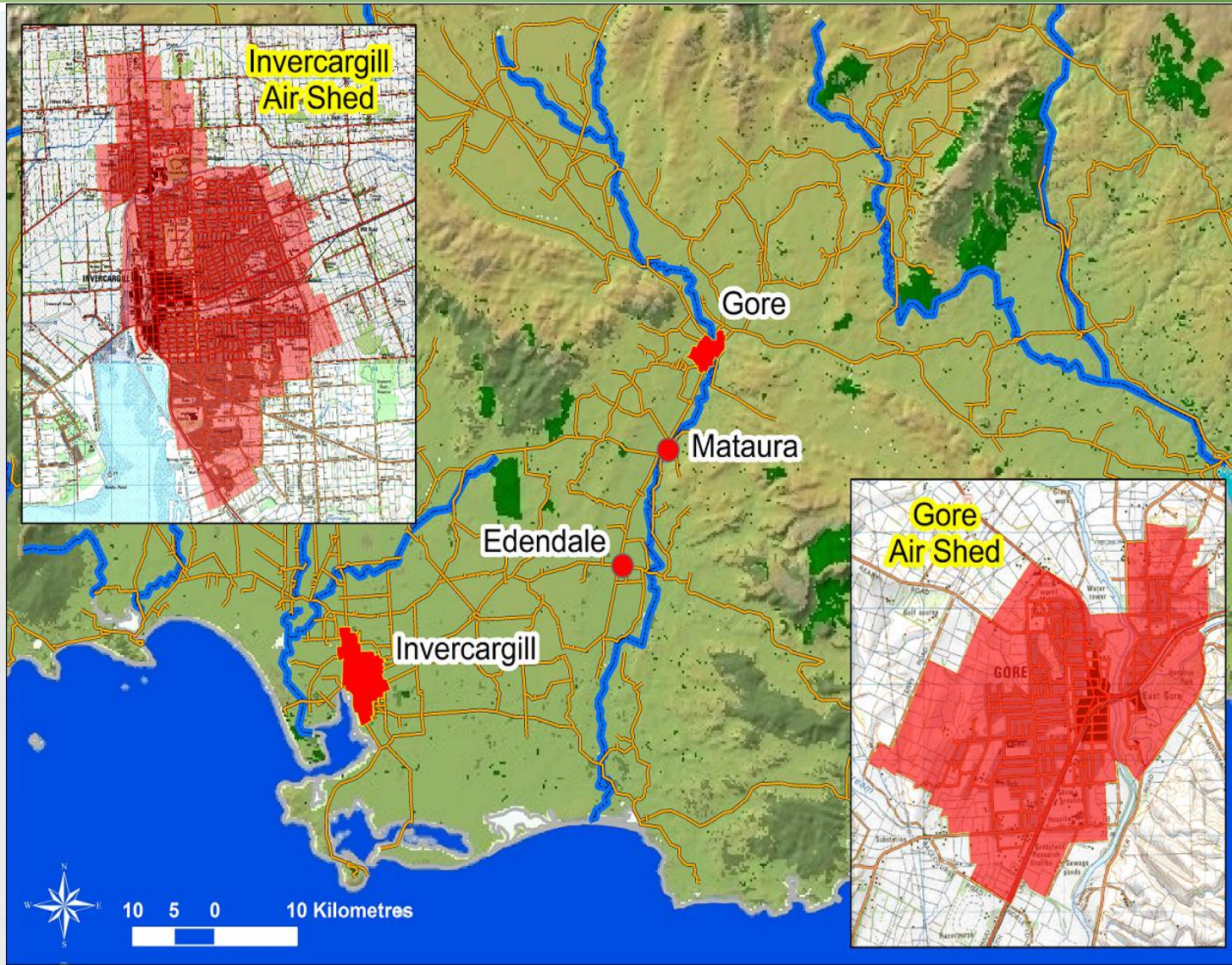
Gore

96%

Result – Air Pollution

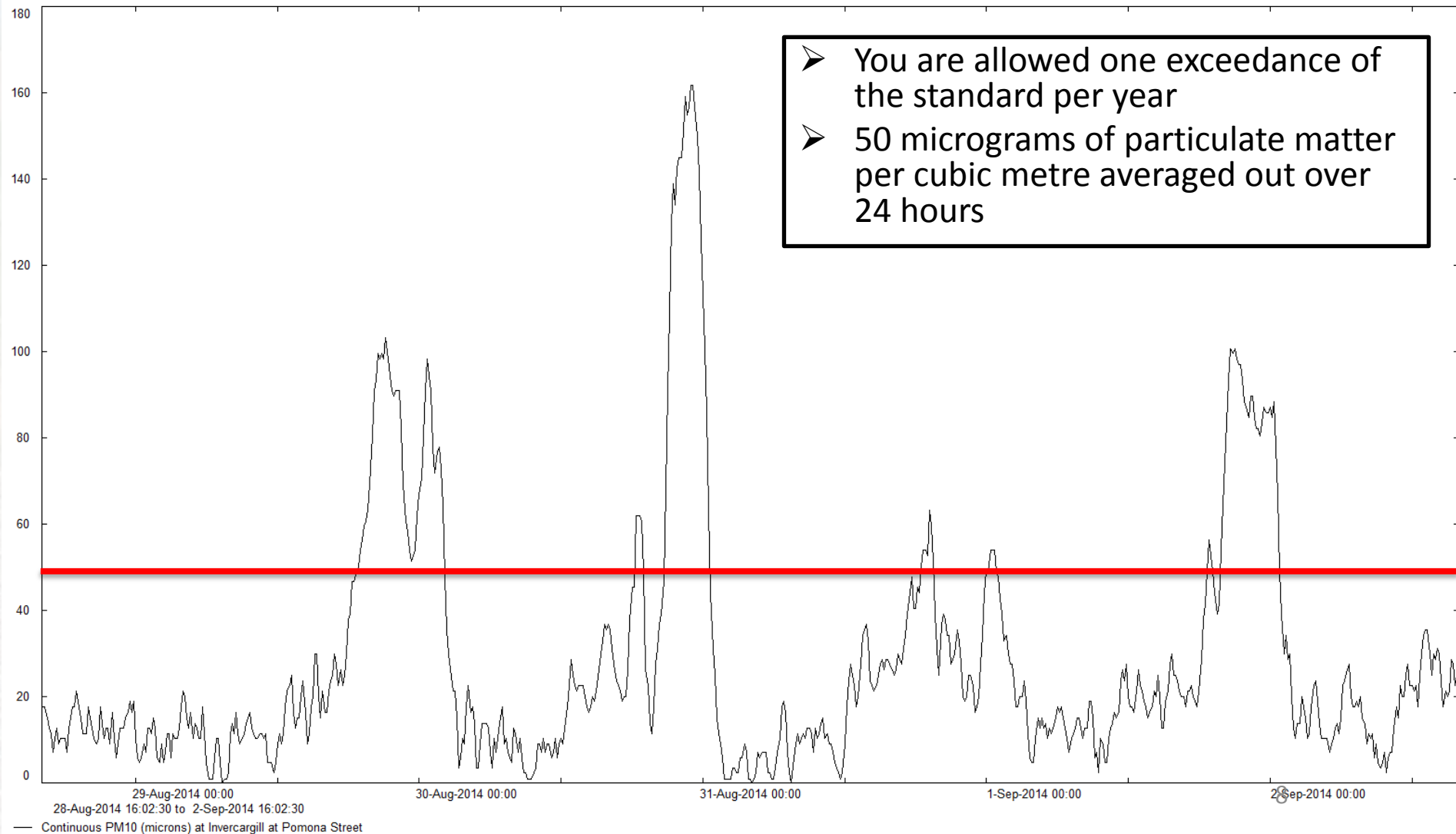


Gazetted Airsheds in Southland



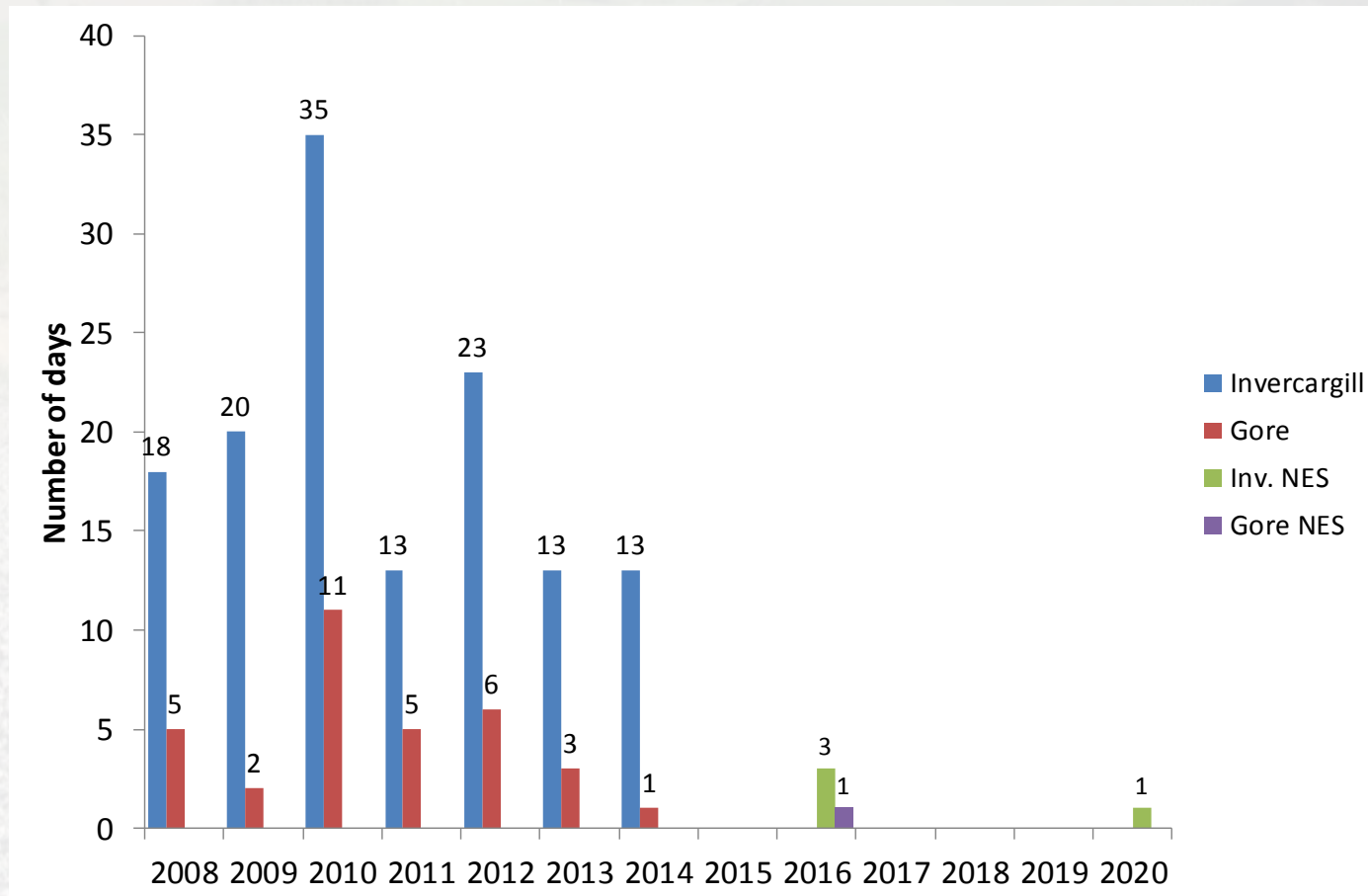
Monitoring – What is the standard?

- You are allowed one exceedance of the standard per year
- 50 micrograms of particulate matter per cubic metre averaged out over 24 hours



How bad is it? - Exceedances summary

Figure 1: Number of days when exceedances occurred in Invercargill and Gore, 2008 to 2014 (as at 3 Sept). NES targets for each airshed are also shown.



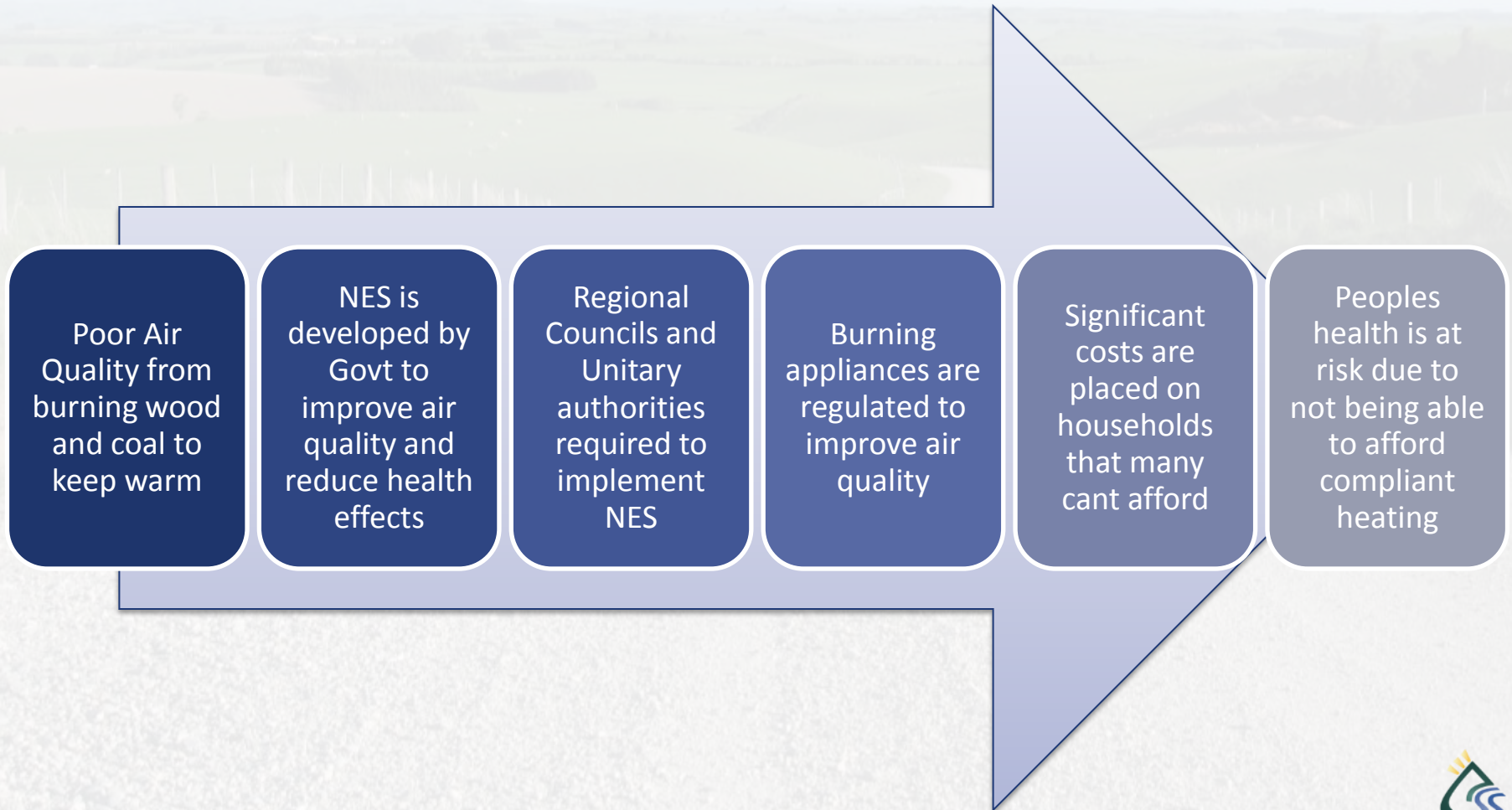


Southland's Air / Ngā Hau o Murihiku

State of the Environment Report



Social implications – Who's affected?



Balancing Act

We all want clean air and to stay warm

I can't afford to change

What if there's a power cut?

I like my fire

I don't want to be cold



The Consequences

Improving air quality at a social cost...

What assistance is available?

- EECA
- Southland Warm Homes Trust
- Invercargill City Council Pilot Loan Scheme
- Discussions with Gore District Council

Is that sufficient, what more could we do?

Change – What are we doing?

Regulate

Regional Air Quality Plan for Southland



March 1999

Educate

WARM UP WISELY

Getting the best out of your wood burner

Air Pollution

Air pollution is a problem in both Invercargill and Gore during winter. At times it reaches alert levels, which means the level of small particles (PM₁₀) exceeds the national standards designed to protect human health. More than 90 percent of human-caused PM₁₀ is a result of burning wood and coal in domestic burners.

The Government has set target deadlines for meeting the national standards for PM₁₀. For Gore it is 1 September 2016 and for Invercargill it is 1 September 2020.

As a community we need to find ways to reduce our levels of PM₁₀ to meet these targets. It is impractical to ban all wood burners, but we can change how we use them.

By operating our burners in ways that minimise smoke – which contains the harmful PM₁₀ – we can all contribute to reducing air pollution and improving our air quality.

Introduction

This guide offers key information on how to enjoy your wood burner safely, get the best heat out of your firewood and decrease the amount of smoke being released into the air.

Many people burn wood as a source of heat and enjoyment. It's economical, renewable and can heat your home well, when used effectively.

The efficiency of wood burners varies. However, they are preferable to open fires, which actually draw heat from your home.

A wood burner or open fire that is not being used efficiently can produce excessive smoke, which wastes energy and your money, builds up dangerous creosote and creates air pollution. Poorly maintained wood burners and open fires can also be fire hazards.

Burning wet or green wood and banking fires are major contributors to the smoke and air pollution in our community.

Lighting Your Fire

- Open the air control.
- Put screwed up newspaper at the base.
- Criss-cross the newspaper with plenty of kindling.
- Add a few smaller pieces of wood.
- Light the newspaper in several places, starting from the back.
- Load wood loosely so air can circulate.
- Always use dry wood.

Once Alight

- Keep the fire burning brightly.
- Keep the air control open for at least 30 minutes.
- Burn several smaller logs, rather than a single, large log.
- When adding more logs, fully open up the air control for 20-30 minutes.
- Ensure the air supply doesn't become blocked at the base by a badly positioned log.
- Don't bank your fire.
- Don't burn any rubbish.



environment SOUTHLAND Te Taiaro Tonga

Rules – Domestic Heating Invercargill and Gore Airsheds

Permitted – New installations

- NES Approved wood burners
- Liquid or gas burners
- Pellet fires
- Heat pumps

Rules – Domestic Heating Invercargill and Gore Airsheds

Prohibited – New installations

- Multi fuel burners
- Any other burner that is not on the NES approved burner list

Rules – Domestic Heating Outside the Airsheds

Permitted – New installations

- NES Approved wood burners (<2ha)
- Multi fuel burners
- Liquid or gas burners
- Pellet fires
- Heat pumps

Rules – Domestic Heating Invercargill and Gore Airsheds

EFFECTIVE FROM	NEW RULE
1 September 2015	The use of open fires is prohibited.
1 January 2016	The use of any non-approved burner/boiler installed before 1 January 2001 is prohibited.
1 January 2021	The use of any non-approved burner/boiler that was installed between 1 January 2001 and 1 September 2005 is prohibited.
1 January 2025	The use of any non-approved burner/boiler that was installed between 1 September 2005 and 1 January 2010 is prohibited.
1 January 2029	The use of any non-approved burner/boiler that was installed between 1 January 2010 and 6 September 2014 is prohibited.

Rules – Domestic Heating

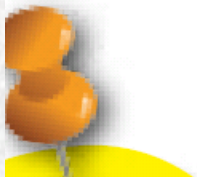
Prohibited Fuels – Southland wide

What you CAN burn for home heating

- ✓ Dry wood – wood that's been drying for approximately 9–12 months and stored/stacked correctly
- ✓ Low sulphur content coal – talk to your coal supplier for advice

What you CAN'T burn for home heating

- ✗ Wet wood – wood that has been drying for less than 9 months and/or not stored correctly
- ✗ High sulphur content coal – talk to your coal supplier for advice
- ✗ Chemically treated timber – such as fence posts and some building materials
- ✗ Painted and varnished timber
- ✗ Household rubbish and plastics
- ✗ Waste oil



Rules – Outdoor Burning Invercargill and Gore Airsheds

Outdoor Burning in Winter

From 1 May 2015, you will no longer be able to burn outdoors in the Invercargill and Gore airsheds during winter (1 May to 31 August), except for:

- Cooking – e.g. barbeques
- Outdoor fireplaces no bigger than 1m², including braziers

Rules – Outdoor Burning Southland wide

What you CAN burn outdoors

- ✓ Vegetation
- ✓ Paper
- ✓ Cardboard
- ✓ Untreated wood

What you CAN'T burn outdoors

- ✗ Chemically treated timber – such as fence posts and some building materials
- ✗ Painted and varnished timber
- ✗ Household rubbish and plastics
- ✗ Waste oil

Agrichemicals and Fertilisers

Agrichemicals and Fertilisers

Agrichemicals must be prepared according to manufacturer's instructions and applied at the recommended concentration and application rates. Application must be undertaken so that agrichemicals do not spray or drift onto any adjoining property.

The discharge of fertiliser to air is a permitted activity, provided there is no fertiliser drift within 30 metres of a residential unit or over any property that is:

- organic (registered or certified)
- an orchard where there is fruit present.

Stage 2 – Industrial and Commercial

2015

- To begin once decisions are made on Stage 1

From 2016

- Review and update existing framework and provisions

From 2016

- Consultation with stakeholders to identify right approach for Southland