

Fire Plan for Southland, Te Kei 2021-2024



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Status of this document

This document is issued by Fire and Emergency New Zealand.

Recommendations for change

The document, its content and specific processes are not to be altered except through Fire and Emergency New Zealand document management processes.

Requests or recommendations for changes to this material should be sent to the Region Manager, Te Kei

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Document information

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Approval

Full Name: Mike Grant

Title: Region Manager, Te Kei

Date: 26/07/2021



Signature

Introduction

How to use this document

The front sections of this document contain information about fire plans in general, and the basics of Fire and Emergency New Zealand's fire control powers and how we use them to reduce the risk of unwanted fires, particularly around fires in the open air.

The back portion of this document contains the locally specific information relevant to this fire plan area, as these fire plans must take the local fire risk conditions into account, and not just apply a blanket standard across the country. All of our areas have different levels of risk, so what may be appropriate for one area of the country may not apply somewhere else.

Why do we have fire plans?

Fire plans are required by [section 22](#) of the [Fire and Emergency New Zealand Act 2017](#) and the [Fire and Emergency New Zealand \(Fire Plans\) Regulations 2018](#).

According to [Regulation 5](#) of the Regulations, the purpose of a fire plan is to:

- provide transparency and predictability in relation to the use of Fire and Emergency's fire control powers under sections [52 to 58](#) and [62 to 68](#) of the [Fire and Emergency New Zealand Act 2017](#) in each local area; and
- ensure that the particular fire risk conditions in each local area are considered by Fire and Emergency when it establishes policies and procedures for, and exercises fire control powers within, that local area.

This means that we need to explain how we set locally-appropriate triggers for changing fire seasons for outdoor fires to require permits, or to prohibit fires and even restrict activities that may cause unwanted fires, and how we apply our other powers to manage fire hazards or require firebreaks. This helps people to understand what to expect, how to plan for this and what they need to do to comply with any requirements.

Content of the fire plans

Fire plans must:

- describe the particular fire risk conditions that exist or are likely to exist in the local area. This means that each fire plan is accurate and relevant for its area, and the fire plan can be broken down into specific zones within the area where fire risk conditions or control measures differ.
- set out the policy for fire control in the local area. This sets out when and why we restrict or prohibit fires in the outdoors, or restrict activities that may cause unwanted fires, and manage fire hazards or require firebreaks
- set out the procedures to be followed for fire control in the local area, including details of the processes that Fire and Emergency will follow, and the factors that Fire and Emergency will consider, when deciding to:
 - issue notices of prohibitions or restrictions for fire control under [section 52](#) of the Act
 - declare a prohibited or restricted fire season in relation to the local area, or a part of that area, under [section 56](#) of the Act
 - issue notices in relation to firebreaks under [section 62](#) of the Act
 - issue notices to remove or destroy vegetation or other things on land under [section 65](#) of the Act.

This means that our communities understand how we have come to those decisions, and that we can show that they are evidence-based decisions that don't impact on recreational and economic activities unnecessarily.

A fire plan must be consistent with:

- Fire and Emergency's national strategy
- any local planning by Fire and Emergency in respect of the local area
- any current operational service agreement and memorandum of understanding that Fire and Emergency has with other agencies or people relevant to the local area
- any relevant Fire and Emergency policies.

A fire plan must cover the entire local area that it relates to, but we can break each area down into smaller zones to manage them individually. This ensures that each fire plan is relevant to everywhere within its area.

Fire plans are not about how we fight fires in the local area, or the resources available to do so. This plan is about how, when and why Fire and Emergency will exercise its fire control powers to reduce the incidence of unwanted fires in the area.

Local area and zones

Local area

In the context of these fire plans, local area is the area within each Local Advisory Committee's boundaries.

The Fire and Emergency New Zealand (Fire Plans) Regulations 2018 indicate that Fire and Emergency must prepare and issue a fire plan for each local area as soon as possible after the boundaries of the Local Advisory Committee in respect of the local area are set.

In May 2019, the Board of Fire and Emergency New Zealand approved Local Advisory Committee boundaries aligned with the Civil Defence Emergency Management Group (CDEMG) boundaries as originally proposed and publicly consulted, with one modification to include the Tararua District in the Hawke's Bay Local Advisory Committee area.

Zones

Zones within an area can be based on climatic conditions, geographical features or land use based on previous work on analysing the wildfire threat, or territorial authority, to enable fire seasons to be applied to the zone in a way that makes sense from a fire science point of view, and our ability to communicate where the boundaries are with the public.

Consultation

Before issuing a fire plan for a local area, or an amended fire plan, Fire and Emergency must:

- publish a notice that:
 - gives an overview of the content of the proposed plan
 - states where you can see and read a copy of the plan
 - specifies how you can make a submission on the plan and where to send your submissions
 - specifies the closing date and time for submissions
- consider every submission received by the closing date and time for submissions.

This notice must be published in the Gazette, or in a newspaper circulating in the local area, or a website.

Key stakeholders

A list of key stakeholders involved in the creation of the plan, those who should contribute to its maintenance and relevant decision making is included as the stakeholder schedules in the local area and zone information in this plan.

Review and amendment

Fire and Emergency may amend a fire plan at any time, but we must review the fire plan for each local area at least once every 3 years, or if there are significant changes to the boundaries of the local area.

When we review the fire plan for a local area, we must confirm that the fire plan remains appropriate for that area; or amend the fire plan as necessary, and consult on changes.

This is the first time that fire plans of this nature have been developed under the new legislation. These plans may be reviewed and amended sooner than the 3 year time limit to ensure we can continue working with stakeholders to improve the plans.

4 Rs of emergency management

New Zealand's approach to emergency management can be described by the four areas of activity, known as the '4 Rs' – reduction, readiness, response and recovery.

Fire plans are a part of our work in the Reduction space. Previous fire plans under the old rural fire authorities also had components of Readiness and Response, and that information is now incorporated into other planning work and operational procedures.

Have a look at the range of work that Fire and Emergency does in each of the 4 Rs.



Reduction

Identifying and analysing long-term risks to human life and property; taking steps to eliminate these risks if practicable, and, if not, reducing their impact and the likelihood of them occurring.

The first of Fire and Emergency's principal objectives is to reduce unwanted fires.

For Fire and Emergency, this work includes:

- our national framework for fire control, which includes these fire plans, and our fire control powers for reducing the likelihood of unwanted fire from the use of fire in the open air, and other causes of wildfire through setting fire seasons, requiring fire permits, firebreaks and fire hazard removal.
- evacuation procedures and evacuation schemes for buildings
- input into building design for fire safety, and our part in the building consent application process
- the national automatic fire alarm system
- influencing policies within standard-setting bodies and with central and local government
- public education campaigns around escape planning, fire safety, and smoke alarms.

Readiness

Developing operational systems and capabilities before an emergency occurs, including self-help initiatives for the public, specific programmes for emergency services, lifeline utilities and other services.

For Fire and Emergency, this includes:

- establishing and maintaining our response capability (our fire stations and trained people) across the country
- the 111 call centre where the public can report fires and other emergencies
- contact lists and contracts with service providers that we can use in response
- tactical plans (how we plan to respond to a particular site or location)
- community planning
- work with local government around provision of water for firefighting

Response

Attending incidents and taking immediate action before, during or directly after an incident to protect and preserve life, prevent or limit injury, reduce damage to land or property, protect the environment and help people begin recovery.

For Fire and Emergency, this includes:

- firefighting
- responding to hazardous substance incidents
- rescuing trapped people
- urban search and rescue

It can also include responding to:

- medical emergencies
- maritime incidents
- other rescues
- weather events and disasters
- incidents where substances present a risk to people, property or the environment
- any other situation where we can assist.

Recovery

Helping people who have suffered loss and trauma to receive the appropriate support. Coordinated efforts and processes to bring about the immediate, medium-term and long-term recovery of a community following a major emergency.

For Fire and Emergency, this includes:

- our immediate actions at emergencies following good incident management practices that minimise the short-term and long-term impact and consequences of the original event
- ensuring those immediately affected by the emergency get the support they need, including making sure people suffering loss and trauma receive appropriate support from the relevant agency.
- In addition, as a precursor to recovery, we support and encourage community pre-planning for major events and support recovery/clean-up activities to strengthen community resilience following an incident.

Our commitment to working with Māori as tangata whenua

Fire and Emergency recognises the status of Māori as tangata whenua and, as such, the importance of Māori communities as key stakeholders in Fire and Emergency's work.

We recognise:

- Iwi and Māori as community leaders with an important role to play in preventing fires and other emergencies, building community resilience, and informing emergency response
- Iwi as our partners in risk reduction as significant and growing land and forest owners
- Māori are disproportionately affected by unwanted fires, and that needs to change.

By committing to work with tangata whenua, we contribute to a safer environment not only for Māori but for all New Zealand communities.

We will do this by building strong relationships that enable us to engage with iwi and Māori as we design and deliver services. This will require us to engage in culturally appropriate ways. We will strengthen our cultural capability, diversity and inclusion, so that we better reflect and engage with the communities we serve.

National Framework for Fire Control

Not all fires are unwanted. New Zealand has a long history of using fire as a tool, for land management, or for cooking, comfort and warmth.

The National Framework for Fire Control consists of policies, procedures and tools that enable Fire and Emergency to manage fires – supporting people to safely use fire where appropriate and restricting or prohibiting its use when there is a risk of unwanted fire.

The public face of this is the [Checkitsalright.nz](https://www.checkitsalright.nz) website, the [fire permit application system](#), these fire plans, and additional information on our public website – [fireandemergency.nz](https://www.fireandemergency.nz).

Fire and Emergency has a number of statutory fire control powers that can be applied to help reduce risk, as follows:

- Setting fire seasons
- Prohibiting fire in open air or revoking the prohibition
- Prohibiting or restricting activities or revoking the prohibition or restriction
- Fire permitting
- Control of firebreaks
- Fire hazard removal

Our policies

The current internal policies and supporting processes that guide our decisions and actions are:

Policy	Detail
Fire seasons, prohibitions and restrictions policy	Relating to sections 52 to 58 of the Act and decisions to: <ul style="list-style-type: none"> • declare or revoke a prohibited or restricted fire season • prohibit fire in open air or revoke a prohibition • prohibit or restrict activities that may cause a fire to start or spread, and revoke prohibition or restriction.

Policy	Detail
Fire permitting policy	Supporting the policy above and also defining actions for: <ul style="list-style-type: none"> • supporting a member of the public who is applying for a fire permit • assessing a fire permit application • granting or renewing a fire permit • refusing to grant or renew a fire permit • suspending or cancelling a fire permit • operational decisions when responding to an alarm of fire in open air.
Fire hazard removal policy	Relating to sections 65 to 67 of the Act and decisions about what to do when: <ul style="list-style-type: none"> • a potential fire hazard is reported to Fire and Emergency • we assess a potential fire hazard • we arrange for the removal or destruction of a confirmed fire hazard.
Compliance and enforcement policy	Covering how we monitor and take action to identify and influence landowners and others to comply with the requirements of the Act and other relevant legislation. This covers activities which: <ul style="list-style-type: none"> • reduce harm from unwanted fire • support the safe use of fire as a land management tool and reduce harm if fire escapes control • minimise avoidance of the Fire Emergency levy • reduce non-compliance with any legislation or regulations under which Fire and Emergency New Zealand has a compliance function.

Note: work is also under way to define policy and guidance for both internal and stakeholder audiences, covering:

Policy	Detail
Firebreaks	Relating to sections 62 to 64 of the Act to support decisions and actions relating to requirements for landholders to: <ul style="list-style-type: none"> • make and clear any firebreak on the landholder's land • remove any vegetation or other thing from an existing firebreak.

Fire risk conditions

The circumstances where we can use our fire control powers to prohibit fire and or restrict other activities are defined in the Act as when:

- fire risk conditions exist or are likely to exist in the area; and
- the prohibition or restriction is necessary or desirable for fire control.

We also take these into account when setting fire seasons.

Fire risk conditions are defined in the Act as weather or other conditions that will, or are likely to, endanger persons or property by increasing the risk of the outbreak or spreading of fire.

Other conditions, considered to be fire risk conditions for the purposes of exercising our fire control powers, include:

Condition	Description
Fire weather science	The NZ Fire Danger Rating System includes measures, such as: <ul style="list-style-type: none"> • Build-up Index (BUI) • Initial Spread Index (ISI) • Fire Weather Index (FWI) • Grass curing percentage • Fine Fuel Moisture Code (FFMC) • Drought code (DC).
Topography	Factors that influence how a fire spreads, including: <ul style="list-style-type: none"> • steepness of slope • direction fire is facing, i.e. aspect • terrain features, e.g. gullies and chimneys.
Fuel behaviour models	The characteristics of fuel, or vegetation, that contribute to fire ignition and spread.
History of fires	History of recent fires in the area, based on available fire data.
Socio-economic factors	Factors that influence the likelihood of fires being lit for cooking purposes and to dispose of rubbish in backyards, e.g. absentee owners and lifestyle blocks burning during holiday season. Expectations of the public to be able to light certain types of fires, e.g. cultural cooking fires.
Time of year	Time of year, e.g. land clearing forestry, land clearing hill and high country, late winter to spring.
Public knowledge – awareness of the risks	The expected public awareness of risks may be low, e.g. a large influx of visitors during summer holiday periods, who may reasonably be expected to have little understanding of the risks of lighting fires in an area.
Proximity to property or other values	The closeness of property or other valuables to fire, for example: <ul style="list-style-type: none"> • life values, e.g. size of land parcels in an urban area • distance from commercial forestry.
Ability to provide an effective response	Factors that contribute to our ability to respond to an out of control fire include: <ul style="list-style-type: none"> • availability of response resources, i.e. people and equipment • isolation • accessibility issues • availability of water supplies.

Condition	Description
Impacts from natural disasters	Natural disasters are likely to influence resource availability and the likelihood of fires.
People	The presence of people increases the risk of fire.
Impact of other events that increase the risk of the outbreak or spread of fire	Events that increase the risk of potential fire, e.g. the rupture of an oil pipeline.

Fire seasons

Fire seasons are used to inform people about the requirements for or restrictions on lighting fires in the open air, and to manage the use of fire to protect communities from the consequences of unwanted fire.

Fire and Emergency can declare or revoke a prohibited or restricted fire season in an area, and uses its Fire seasons, prohibitions and restrictions policy and associated processes to manage this.

Fire seasons are applied to geographic zones based on:

- the fire environment (fuel types, curing, weather, topography, historic trends)
- fire climatic zones
- topographical boundaries/features (rivers, roads, coast lines, forest and national park boundaries)
- fire control considerations.

One of three types of fire season is in force at any time in an area or zone:

Open fire season



Fires may be lit in open air, without restriction. Applies whenever there is not a prohibited or restricted fire season in place.

Restricted fire season



Lighting a fire is riskier than usual. A fire permit is required and may also have specific conditions to make sure fires can be safely lit and remain under control.

Prohibited fire season



Lighting fires in the open air is not permitted. Existing fire permits are suspended, though fire permits may still be granted in exceptional circumstances.

It is important that stakeholders know what the current fire season is, and understand how they can comply with the requirements.

To see what the current fire season is within a local area (or zone within an area) go to checkitsalright.nz.

Open fire seasons

We use an open fire season when the fire danger is consistently low enough that Fire and Emergency does not need to apply additional controls on when people can light fires in the open air.

Note that this does not mean that you can light fires anywhere you want to. Department of Conservation, local council or regional council bylaws or air quality plans may apply additional restrictions, or not allow you to light a fire at all.

You must also have permission from the landowner or occupier to light a fire, even in an open fire season.

We still like to hear from you if you are lighting a large fire, e.g. for land clearing or burning crop stubble, so that we can share advice on how and when to conduct your fire safely.

Restricted fire seasons

We use restricted fire seasons when the fire danger has increased enough that we need more control over where, when and how people use fire.

Requiring permits for particular types of fires in the open air means that we can understand where and when fire is being used, so that our fire brigades don't need to respond unnecessarily.

It also gives us an opportunity to give advice about how the fire can be conducted safely, or we can apply conditions around when the fire can be lit, how big it can be, or any other requirements that reduce the chance of the fire escaping control.

Prohibited fire seasons

When the fire danger reaches higher levels, we need to stop people from lighting fires that may escape, as the fire behaviour during these conditions makes fires very difficult and dangerous to contain, control and extinguish.

Certain types of fires may still be used, but people need to be very careful with fire during these times. See the section on [Authorised fire types in a prohibited fire season](#).

Trigger thresholds for changing fire seasons

The New Zealand Fire Danger Rating System and its component Fire Weather System provide us with a consistent, scientific way to monitor the fire danger in an area.

Trigger thresholds, based on relevant fire weather measurements and values are set in consultation with stakeholders for declaring restricted and prohibited fire seasons within the fire plan area or fire permit zone within that area. The trigger thresholds identify when prevailing weather conditions create ongoing potential for problem fires.

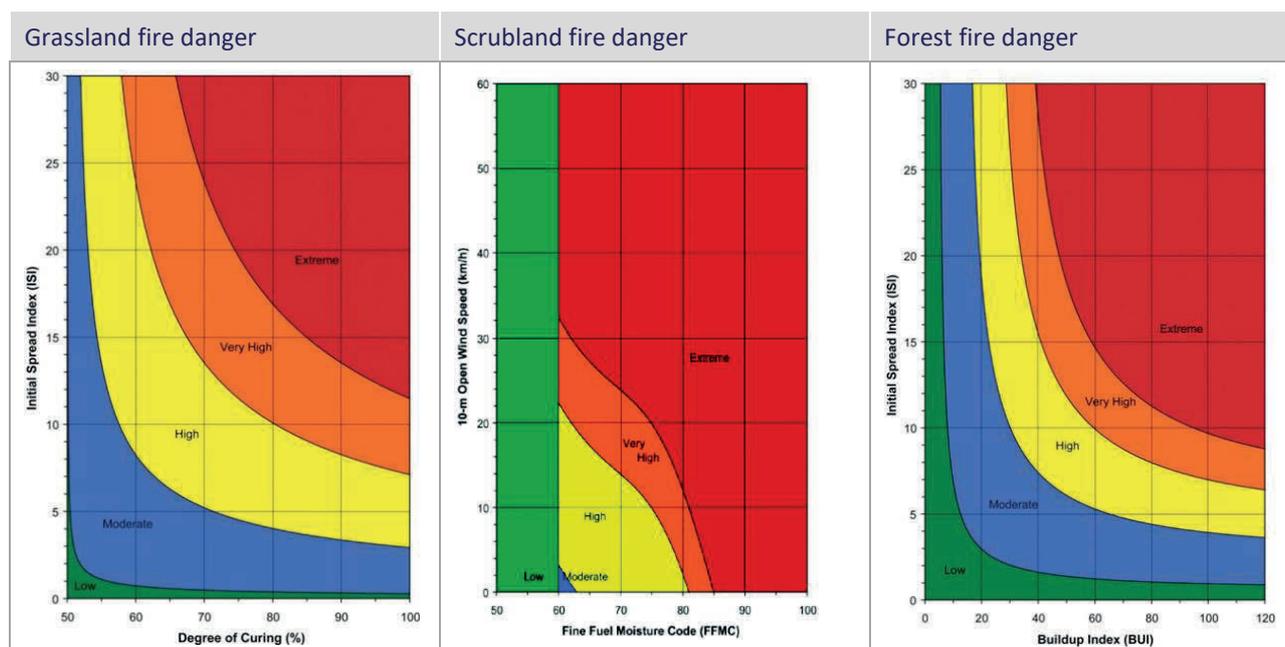
The trigger thresholds make use of:

- the Remote Automatic Weather Station (RAWS) climatology data for the fire plan area or zone.
- historical fire data for the fire plan area or zone.

Other factors such as resource availability, other emergency events etc., may also feed into a decision to declare or revoke a fire season earlier or later than the trigger threshold would indicate.

Forecast weather trends must be taken into consideration when declaring a change in fire season. An upcoming rain event may defer a change in fire season, or forecast dry weather and strong winds may indicate a need to change fire season days before the trigger threshold would otherwise be reached.

Locally agreed thresholds will be listed in the zone information in this document.



Prohibiting fires in open air (section 52)

There are times when Fire and Emergency may need to prohibit fires in the open air, outside of the usual fire season changes. This control is used very rarely, in exceptional circumstances, for example when:

- large or multiple incidents occur that put firefighting resources under strain
- extreme fire weather conditions occur during a restricted fire season, e.g. strong dry winds, high temperatures associated with very low humidity
- emergency events occur, e.g. the rupture of the Marsden Point fuel pipeline, increasing the fire hazard in a specific area.

We can only prohibit fires in the open air when fire risk conditions indicate that the prohibition or restriction is necessary or desirable for fire control.

Fire and Emergency may also prohibit fires in the open air while the Epidemic Preparedness (COVID-19) Notice 2020 is in force, without needing to consider fire risk conditions or other factors. This might happen if our response capabilities are affected by COVID, and we aren't able to respond effectively if there is an unwanted fire.

Fire and Emergency can create temporary zones that are smaller than the zones in this fire plan for the purposes of limiting the impact of prohibiting fires in open air under [section 52](#).

If someone breaches the ban, they can be charged under [section 54](#) of the Fire and Emergency New Zealand Act 2017.

Trigger thresholds for prohibiting fire in open air

We can use the same Fire Weather System trigger thresholds for prohibiting fires in the open air under [section 52](#) as we do for changing to a prohibited fire season, but use [section 52](#) when the fire risk conditions are not expected to last long enough to make changing to a prohibited fire season practical.

If Fire and Emergency has come to an agreement with stakeholders on other thresholds for when to implement a [section 52](#) prohibition of fire in open, these will be included in the zone information in this document.

Restricting and prohibiting activities (section 52)

There are times when fire risk conditions are elevated to an extent that certain activities may cause a fire to start or spread. Examples of these activities include but are not limited to:

- roadside mowing
- cutting or welding operations outdoors that involve the use of portable gas, disc grinder or arc welding equipment that produces sparks, flames or heat, generally known as 'hot works'
- chainsaw thinning to waste/tree felling
- mowing, ploughing or harrowing fields
- use of fireworks and flying lanterns
- firing tracer bullets.

[Section 52](#) of the Act allows us to prohibit or restrict one or more activities in an area or areas, when our assessment is that:

- the activity, (including access to an area) may cause a fire to start or spread and adequate controls are not available
- [fire risk conditions](#) exist or are likely to exist in the area
- the prohibition or restriction is necessary or desirable for fire control purposes
- there is an inability to adequately mitigate the assessed risk.

Prohibition or restriction means:

When an activity is...	It means the activity...
Prohibited	must not be undertaken at all by any person while the prohibition is in effect (except if it is an excluded activity that relates to the carrying out of essential services in the area).
Restricted	can be undertaken subject to certain conditions, such as restrictions on: <ul style="list-style-type: none"> • the times of the day • the manner in which it is undertaken.

If we have restricted or prohibited access to a location under [section 52](#), we can't prevent someone who lives or works in the location from entering. [Section 52](#) also doesn't prevent someone from carrying out essential services where it applies.

Essential services are:

- for the supply and distribution of food, water, fuel, power, and other necessities
- for the maintenance of transport and communication facilities that are essential to the well-being of the community
- for the maintenance of the health of the community
- for the maintenance of law and order, public safety, and the defence of New Zealand
- for the preservation of property at immediate risk of destruction or damage.

Fire and Emergency can create temporary zones that are smaller than the zones in this fire plan for the purposes of limiting the impact of restricting or prohibiting activities under [section 52](#).

If someone fails to comply with the restriction or prohibition, they can be charged under [section 54](#) of the Fire and Emergency New Zealand Act 2017.

Trigger thresholds for restricting or prohibiting activities under section 52

Some industries have their own restrictions that they place on themselves when fire risk increases. However, when these voluntary restrictions are not enough to reduce the risk of a fire starting or spreading, or we need to restrict or prohibit the public from the same high risk activities, then we will use [section 52](#) to apply the restrictions or prohibitions to everyone within the zone.

Our policy for fire seasons, prohibitions and restrictions says that we only prohibit or restrict activities if we have engaged with stakeholders and they are unable to satisfactorily mitigate the identified risks.

Legally restricting or prohibiting activities can have a significant economic impact, so should not be done without due consideration.

If Fire and Emergency has come to an agreement with stakeholders on set thresholds for when to implement a [section 52](#) restriction or prohibition of activities, these will be included in the zone information in this document.

Activities and risk mitigation

Forestry operations

The NZ Forest Owners Association have developed the [Forest fire risk management guidelines](#) (2018) which contains trigger point tables and what fire prevention actions are required during different fire danger levels. These guidelines are supported by Fire and Emergency.

If local trigger values have been set, they will be listed in the zone information in this document. NIWA's website will be updated to display the levels decided locally.

Powerline auto-reclosers

Most power companies use a computer-controlled auto recloser system which attempts to reconnect the power up to three times following a fault before a technician needs to be sent. If the fault was the result of a downed wire(s), this creates three potential sparking events.

If local trigger values have been set, they will be listed in the zone information in this document. NIWA's website will be updated to display the levels decided locally.

Power companies also make use of other reduction activities, following the [Electricity \(Hazards from Trees\) Regulations 2003](#), such as trimming trees around power lines, providing fault reporting to public, undergrounding power lines, and providing tree planting guidance.

Hot works

This includes activities such as welding, grinding, chain sawing, metal cutting, mowing and railway track maintenance.

If local trigger values have been set, they will be listed in the zone information in this document. NIWA's website will be updated to display the levels decided locally.

Fire and Emergency will work with Waka Kotahi (NZTA) and local councils on roadside mowing issues during days with elevated fire danger, and changing operations to suit conditions.

We will also work with Federated Farmers through the Land Management Forums to discuss the approach to fire measures, the use of machinery and equipment during high fire danger periods and the potential effect on local landholders.

Fireworks

Fire and Emergency does not regulate the use of fireworks when fire risk conditions are not elevated.

Sale of fireworks is regulated by the [Hazardous Substances \(Fireworks\) Regulations 2001](#) and storage by the [Health and Safety at Work \(Hazardous Substances\) Regulations 2017](#).

Council bylaws may limit where and when fireworks may be used.

When fire risk conditions are elevated, Fire and Emergency can restrict or prohibit the use of fireworks as an activity under [section 52](#) of the Fire and Emergency New Zealand Act 2017.

This prohibition does not include pyrotechnics displays as these are permitted activities that are assessed by risk management staff as part of their application for approval of the pyrotechnics display.

Whether fireworks should be banned is a decision for Government, and our work related to fireworks will continue to reflect decisions made by central Government.

Fire and Emergency is responsible for promoting fire safety, and provides advice to the public to promote the safe use of fireworks. We recommend people attend publicly organised displays where possible.

Communicating changes in fire seasons and restrictions or prohibitions

It's important that people planning to light fires in the open air know whether they can do so safely and legally, so they need to know what the current fire season is in the area, whether any other prohibition applies, and whether a permit is required.

Fire season changes, and restrictions and prohibitions under [section 52](#) of the Act, are publicly notified to our communities, stakeholders and partners in a number of ways.

Modes of communication can include, but are not limited to:

- Direct contact with our partners and stakeholders, including email
- Local newspaper and radio ads
- Social media and media
- Email and text directly to permit holders
- Check It's Alright website www.checkitsalright.nz or information available by phoning 04 496 3600
- Fire danger or fire season signs – these are changed to reflect season status with additions of “Fire by permit only” or “Total fire ban” or similar messaging.

During periods of elevated and extreme fire danger days, we increase our communication of fire safety and prevention messages to build awareness of the dangers of wildfires and promote positive behaviour changes.

Messaging using traditional and digital media, such as social media and on-demand video can be targeted at affected areas at effective times.

When a fire season change affects public conservation land (PCL), we must also notify the Department of Conservation (DOC) of any intention to declare or revoke a prohibited or restricted fire season on public conservation land. This must also be followed up with a written notification.

Department of Conservation informs visitors of the controls or bans on lighting fires, including for cooking, warmth and campground fires, through notices and advertising.

Fire permits

The information included with a fire permit helps people understand how to light a fire safely, and to reduce the risk of their fire burning out of control. Fire permits carry conditions which vary based on the current local fire risk conditions.

Fire risk conditions vary by time and other factors such as fuel, weather and topography, so the acceptable conditions for burning are set for each fire permit.

Fire permits may also be suspended or cancelled in certain circumstances, such as: where fire risk conditions change, for fire control purposes, or as fire seasons change/prohibitions are imposed.

No liability is imposed on Fire and Emergency because of the granting of a fire permit, under [section 190\(8\)](#) of the Act.

Council bylaws, regional plans, legal covenants or restrictions

Fire and Emergency must only consider the fire risk conditions when issuing permits. We can't apply other organisations' requirements when issuing permits, so even if Fire and Emergency has issued a fire permit, you may not be allowed to light your fire due to other requirements.

Even if a fire permit is not required from us, due to an open fire season etc., you may not be able to light fires in some places.

Council bylaws and regional plan rules relating to smoke and air pollution must also be followed.

Managing smoke nuisance comes under local government jurisdiction and not Fire and Emergency, unless the smoke is an immediate threat to life, however we will still promote good practice and suggest alternatives.

There may also be legal covenants or restrictions which restrict the ability to light a fire in some areas, regardless of the fire season. For example, if there are power pylons or other infrastructure nearby.

You will also need private landowner or occupier approval before lighting a fire, even if Fire and Emergency has issued a fire permit.

If there is signage in a location that says to light no fires or equivalent, then you must follow those instructions.

Where relevant, information about applicable bylaws and regional plans is included in the area overview of this document.

When a permit is needed

The need for a fire permit is based on:

- type of fire
- the fire season or restrictions or prohibitions on fires in the open air.

Fire types

Some fire types may be allowed in restricted and prohibited fire seasons by making them:

- Authorised (no permit required)
- Permit required

For more information on fire types, see [Open air fires – rules and permits](#) on the Fire and Emergency website www.fireandemergency.nz.

Authorised fire types, descriptions and conditions in a restricted fire season

Authorised fire types in a restricted fire season, i.e. those fire types not requiring a fire permit because they are not considered 'fires in open air' are listed below:

Fire type	Description and conditions
Gas-operated appliances	<p>Manufactured gas-operated appliances, such as barbeques, outdoor fireplaces and outdoor gas heaters.</p> <p>Find out more about the safe use of barbeques and gas cylinders and outdoor gas-operated appliances.</p>
Charcoal barbeques or grills	<p>Barbeques or grills that use either charcoal briquettes or natural lump charcoal as their fuel source.</p> <p>Condition:</p> <ul style="list-style-type: none"> • Don't use on an apartment balcony, deck, under a roof overhang or within other enclosed areas. <p><i>If you cannot meet this condition, you must apply for a permit.</i></p>
Wood-fire pizza oven	<p>Also known as wood ovens, these are ovens that use wood fuel for cooking.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your pizza-oven, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Chiminea	<p>A freestanding front-loading fireplace or oven with a bulbous body, and usually has a vertical smoke vent or chimney.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your chiminea, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Hāngī, umu, braai and lovo cultural cooking fires	<p>Conditions:</p> <p>Your fire area must be less than two square metres.</p> <ul style="list-style-type: none"> • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your cultural fire, such as a water hose, mechanical digger, or water sprayer. <p>Find out more about the safe use of cultural fires.</p> <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>

Fire type	Description and conditions
Braziers	<p>A container for hot coals – usually an upright standing or hanging metal bowl or box.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Your fire area must be less than 0.5 square metres. • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your brazier, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Fire pits/bowls	<p>A pit dug in the ground made from stone, brick or metal or a bowl on an upright stand, for recreational use.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Your fire area must be less than 0.5 square metres. • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your fire pit/bowl, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Open drum and manufactured incinerators	<p>A drum or container with a mesh or solid lid designed to prevent the escape of hot ash or fire, and designed exclusively for incineration.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Don't light your fire within five metres of any part of a building, hedge, shelter belt or any combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your incinerator, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>

Authorised fire types on public conservation land in a restricted fire season

Authorised fire types on public conservation land (PCL) in a restricted fire season, i.e. those fire types not requiring a fire permit because they are not considered 'fires in open air' are listed below:

Fire type	Description and conditions
Gas-operated appliances	<p>Manufactured gas-operated appliances, such as barbeques, outdoor fireplaces and outdoor gas heaters.</p> <p>Find out more about the safe use of barbeques and gas cylinders and outdoor gas-operated appliances.</p>
Pressurised liquid cookers	Small cookers that use kerosene or other similar liquids as fuel.
Campfires in a permanent fireplace	Positioned and constructed by the Department of Conservation (DOC) to minimise the threat of fire spread and located within formally established DOC overnight campsites or daytime amenity areas.
Cooking and warming fires	<p>Fires lit in the backcountry (over one-hour walking time from the nearest road end) of public conservation land.</p> <p>Conditions:</p> <p>The fire must not be:</p> <ul style="list-style-type: none"> • within three metres of any tree or any place underneath overhanging vegetation; and • within three metres of any log or any dry vegetation; and • lit unless and until the ground surface within three metres of the site of the fire has been cleared of all combustible material; and • lit where notices and advertising are present which specifically prohibit the lighting of fires or specify the lighting of fires only in other types of receptacles or places; and • lit during a prohibited fire season; and • lit in conditions where wind or other factors may cause the fire to spread to surrounding flammable material. <p>Find out more about the safe use of campfires.</p>

Authorised fire types, descriptions and conditions in a prohibited fire season

Authorised fire types in a prohibited fire season, i.e. those fire types not requiring a fire permit because they are not considered 'fires in open air' are listed below

Fire type	Description and conditions
Gas-operated appliances	<p>Manufactured gas-operated appliances, such as barbeques, outdoor fireplaces and outdoor gas heaters.</p> <p>Find out more about the safe use of barbeques and gas cylinders and outdoor gas-operated appliances.</p>
Charcoal barbeques or grills	<p>Barbeques or grills that use either charcoal briquettes or natural lump charcoal as their fuel source.</p> <p>Condition:</p> <p>Don't use on an apartment balcony, deck, under a roof overhang or within other enclosed areas.</p> <p><i>If you cannot meet this condition, you must apply for a permit.</i></p>
Wood-fire pizza oven	<p>Also known as wood ovens, these are ovens that use wood fuel for cooking.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any other combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your pizza-oven, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Chiminea	<p>A freestanding front-loading fireplace or oven with a bulbous body, and usually has a vertical smoke vent or chimney.</p> <p>Conditions:</p> <ul style="list-style-type: none"> • Don't light your fire within three metres of any part of a building, hedge, shelter belt or any other combustible material. • In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your chiminea, such as a water hose, mechanical digger, or water sprayer. <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>
Hāngī, umu, and lovo and cultural cooking fires	<p>Conditions:</p> <p>Your fire area must be less than two square metres.</p> <p>Don't light your fire within three metres of any part of a building, hedge, shelter belt or any other combustible material.</p> <p>In case your fire gets out of control, you must have a suitable way to extinguish it within five metres of your cultural fire, such as a water hose, mechanical digger, or water sprayer.</p> <p>Find out more about the safe use of cultural fires.</p> <p><i>If you cannot meet these conditions, you must apply for a permit.</i></p>

Authorised fire types on public conservation land in a prohibited fire season

Authorised fire types on public conservation land in a prohibited fire season, i.e. those fire types not requiring a fire permit because they are not considered ‘fires in open air’ are listed below:

Fire type	Description and conditions
Gas-operated appliances	Manufactured gas-operated appliances, such as barbeques, outdoor fireplaces and outdoor gas heaters. Find out more about the safe use of barbeques and gas cylinders and outdoor gas-operated appliances .
Pressurised liquid cookers	Small cookers that use kerosene or other similar liquids as fuel

Permits in prohibited fire seasons or during prohibitions under section 52

Fire and Emergency may grant permits during a prohibited fire season, or when there is a prohibition under [section 52](#) of the Act, when the fire or activity is necessary to prevent, reduce, or overcome any hazard to life or because of any other serious emergency.

We may grant fire permits during a prohibited fire season if weather or other conditions have temporarily reduced the fire hazard, so as to make it apparently safe to light a fire.

Permits issued in a prohibited fire season (e.g. for biosecurity reasons) remain active when the fire season changes.

Applying for a permit

When a fire permit is required, or if you’d like to check whether you need a permit, you can apply:

- Online through Fire and Emergency’s fire permitting system – firepermit.nz
- Over the phone -0800 658 628 - Your application is then completed in the online system on your behalf.
- In person, by asking local Fire and Emergency fire permitting personnel for a fire permit.
- By email or post, using the manual [fire permit application form](#). You can print and complete the form by hand, or complete the editable pdf and send it back to us.

Assessment

The fire permit assessors will make a risk-based decision about whether a desk-based assessment or an on-site inspection of the burn location is required before deciding to grant or refuse the fire permit.

Note: Where an application has multiple burn locations, each location must be considered.

Permit applications must be inspected if the assessor has insufficient information to make a desk-based assessment, or where any of the following apply to the proposed fire:

- it is during a prohibited fire season
- it requires a burn plan
- it is in a location where the predominant fuel type is considered to be of high flammability
- it is in a location that is adjacent to areas of significant commercial or environmental values
- it involves multiple fires burning at the same time in different locations on a property
- it is located on steep or complex terrain; or
- it involves burning large amounts of material unless the applicant has a history of successfully managing similar fires.

Additional factors that can be considered to be fire risk conditions or relevant fire control matters when assessing a fire permit application are:

- the environment around the burn site
- the actual site area and boundaries of the proposed burn
- other property and/or values at risk from a possible escaped fire
- other relevant hazards
- time of ignition, light up sequence and method of the proposed fire
- potential fire behaviour and rate of fire spread
- firebreaks around the area to be burnt
- resources available to carry out the burn safely and effectively
- the applicant's understanding of the risks associated with the proposed fire, and their ability to manage those risks effectively.

Prescribed burn plans may be required for complex and higher-risk burns, e.g. land clearing. They help the person proposing to burn to go through a planning process and consider how to undertake the proposed fire safely.

Developing the [prescribed burn plan](#) is the responsibility of the applicant, however we can provide help and support on what the plan should contain in order to undertake the proposed fire safely.

Mandatory conditions

Every permit must contain standard conditions that are required by the [Fire and Emergency New Zealand \(Fire Permits\) Regulations 2017](#) and cannot be removed. These are:

- You must not light a fire in fire risk conditions that make it likely that the fire will spread beyond the limits of the location or property specified in the permit as the location of the fire.
- If this permit was issued for a proposed fire in an area which is in a restricted fire season:
 - it is suspended if we declare a prohibited fire season or prohibit fire in open air
 - you must, immediately before lighting a fire, make reasonable efforts to confirm that, in the location of the fire:
 - no prohibited fire season is in place; and
 - no prohibition on the lighting of fires in open air is in place.

If the fire permit is issued when fire has been prohibited in open air ([section 52](#) (1) of the Act) the following condition must be included on the permit:

- You must, immediately before lighting a fire, make reasonable efforts to confirm that no restricted or prohibited fire season under [section 56](#) (1) of the Act is in place in the location of the fire.

The permit must also include a condition to notify the Communications Centre immediately prior to lighting the fire, with the relevant phone number, for all fire permits where the fire is likely to be noticed by the public and reported as a 111 call, e.g. where the fire is close to a road or to other houses or buildings, or the fire covers a large area such as land clearing.

When our Communication Centre receives the notification from the fire permit holder they are able to flag the location in their system so that if a 111 call is received it is clear there is a permitted fire.

Firebreaks

Fire and Emergency has the authority under [section 62](#) of the Act to require landholders to make or clear firebreaks on the landholder's land, or keep them clear, if we think it's needed for fire control. This can include green firebreaks of strips of low-flammability, or removing all vegetation down to mineral earth.

We plan to develop a guideline to provide clarity around the times and circumstances when applying this power may be necessary. Our approach is to work with affected landholders to try to reach a voluntary solution before we would use our powers to require firebreaks.

This power relates to making and clearing firebreaks outside of incident response – before a fire happens. Our powers during response in [section 43](#) allow us to create firebreaks as needed to prevent the spread of fire.

Fire hazard removal

If Fire and Emergency reasonably consider that vegetation, or some other thing, is a fire hazard, meaning that it is likely to endanger people or property by increasing the risk of outbreak or spread of fire, we can require that the vegetation or thing be removed or destroyed.

We will work with affected people to fix the issue first, but Fire and Emergency has the authority under [section 65](#) of the Fire and Emergency New Zealand Act 2017 to legally require action. You then have one month to fix the problem, although you can appeal against the requirement. Any appeal must be made within 14 days and will be handled through Fire and Emergency's dispute resolution scheme.

Our fire hazard removal powers apply to land, but not to anything on or inside a building. Local councils have the authority to address fire risk related to buildings, such as hoarding.

If it's urgent (an imminent threat) we can tell you, and immediately fix the problem ourselves in order to keep people and property safe.

Reporting fire hazards

Anyone who becomes aware of a fire hazard or is worried about the potential of something being a fire hazard can report it to Fire and Emergency – see [Submit a Fire Hazard Assessment Request](#) at www.fireandemergency.nz/at-home/fire-hazards-in-your-community/ for the Potential Fire Hazard Advice form.

Assessment of fire hazards

Fire and Emergency will assess whether there is a potential for the fuel to cause harm or damage to people or property if a fire starts. We will assess the likelihood of a fire starting and the consequences in terms of risk to human life, structures and other values.

We use an assessment tool to provide a structured framework for determining whether:

- it is appropriate for us to exercise our fire hazard removal powers under [sections 65–68](#) of the Act
- providing education to the complainant or occupier/owner of the location of the potential fire hazard on how to mitigate risks from fires is more appropriate
- the matter should be referred to another jurisdiction
- no further action is required.

Initial review

The assessor starts by answering four key questions:

- Is the potential hazard: trees close to power lines, or hoarding inside a building? If yes, then the hazard is referred to the relevant lines company or local council for action.
- Is the material involved likely to pose a risk to life or property through ignition without spreading? This covers fuel types that are likely to endanger adjacent or downwind properties (either through creating significant health concerns or possible contamination damage), without spreading. This could be due to smoke toxicity or high intensity of burning.
- Is there sufficient material of appropriate type and composition to support a fire spreading to adjacent property or values? This captures the spread potential, taking into consideration the physical properties of the fuel as well as the general topography and onsite conditions. That includes continuity, size and shape, fuel load and flammability, as well as likely direction of fire travel.
- Is the burning material likely to produce enough heat to cause damage to property? Gives consideration to the fire having sufficient energy to actually cause damage to property if spread to it, or to compromise the health of property users.

Risk assessment matrix

If it's appropriate, we then use a risk assessment matrix. This involves:

- assigning a risk of ignition rating, where 'rare' is a low rating and 'almost certain' is a high rating
- assigning a likely consequence rating for each component, and using the highest value of:
 - human life at risk
 - structure at risk
 - other values at risk
- using the risk of ignition and likely consequence ratings to determine the risk assessment score in the matrix

		Likely consequence (highest consequence rating)				
		1	2	3	4	5
Risk of ignition rating	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5

- using the risk assessment matrix score to determine the next course of action.

Score	Next course of action
20, 25	Must issue a <i>Fire hazard removal notice (s 65)</i> . Consider if an <i>Imminent danger notice (s 68)</i> is appropriate.
15, 16	Consider issuing a <i>Fire hazard removal notice (s 65)</i> , otherwise provide information/education to the occupier/owner /complainant on how to mitigate risks from fire.
10, 12	Provide information/education to occupier/owner/complainant on how to mitigate risks from fire.
6, 8, 9	Consider providing information/education to occupier/owner/complainant on how to mitigate risks from fire.
1–5	No further action.

Outcomes from the fire hazard assessment

The assessment will recommend one of the following courses of action:

1. No further action, because the vegetation or other thing does not present a fire hazard. The matter may be referred to another agency such as the local council if appropriate, e.g. hoarding or vermin infestation.
2. Providing education and information to the occupier or owner of the land, and/or to the complainant, on how to mitigate any risks from fire, where the notice threshold has not been reached but the assessment indicates that proactive action would be helpful.
3. Providing the occupier or owner with the opportunity to voluntarily mitigate the risk within an appropriate time period, as the threshold for issuing a Fire hazard removal notice ([section 65](#)) has been met. If they won't do this voluntarily, we will issue a Fire hazard removal notice ([section 65](#)) to the occupier or owner of the land. The notice gives them one month to remove or destroy the vegetation or other thing increasing the risk of the outbreak or spread of fire.
4. Providing verbal notice to the owner or occupier of the land that we are taking immediate action to remove or destroy any vegetation or other thing on the land, that is a source of imminent danger, under [section 68](#). This power would only be used where there is an 'almost certain' likelihood of a fire starting or spreading at any moment, which would put life or property at risk. Note: This power will be used very rarely.

Powers of entry

We will not enter a property (other than going to the front door) without permission from the occupier.

If permission is not granted or an occupier cannot be located, we will assess the potential fire hazard from outside of the property or speak with the occupier of the neighbouring property to request access to better view the potential fire hazard.

If we need to, a Fire and Emergency inspector can enter and inspect land that is not a home or marae (or a building associated with a marae) in order to determine whether certain materials (including timber, dry plant cuttings and other flammable material) are being stored outside a building in a way that creates a fire hazard to the building, another building, or to any road or other public place (see [regulation 13\(4\)](#) of the [Fire and Emergency New Zealand \(Fire Safety, Evacuation Procedures, and Evacuation Schemes\) Regulations 2018](#)).

A Fire and Emergency inspector must obtain a warrant to enter and inspect land that is a home or marae (or a building associated with a marae).

We can take photographs of private land (or things on private land) from public land, so long as we don't take pictures of an area or thing that a person can reasonably expect to be private (e.g. a photo that includes a view into a shower or a secluded area where someone is sunbathing).

Fire hazard removal notice (section 65)

Fire hazard removal notice ([section 65](#)) is formal written notification under [section 65](#) of the Act to an occupier or owner of land that they must remove or destroy the 'vegetation or other thing' that has been assessed as meeting the threshold for issuing a notice.

The notice:

- describes the vegetation or other thing that must be removed or destroyed, including a map if practicable identifying the specific location or extent of the vegetation or other thing
- explains the risk that Fire and Emergency reasonably considers that the vegetation or other thing presents
- specifies the actions that must be taken to mitigate the fire hazard risk, e.g. how much vegetation must be removed or destroyed.

We will always attempt to negotiate with the occupier or owner to give them an opportunity to fix the issue voluntarily, before we go with issuing a fire hazard removal notice.

The occupier of the land where the fire hazard is located is primarily responsible for its removal or destruction. If the land is unoccupied, then the responsibility passes to the owner of the land.

Occupier, in relation to any place or land, means any person in lawful occupation of that place or land; and includes any employee or other person acting under the authority of any person in lawful occupation of that place or land.

Imminent danger notice (section 68)

An Imminent danger notice is verbal notification under [section 68](#) of the Act to an occupier or owner of land that Fire and Emergency is going to enter the land and remove or destroy any vegetation or other thing on land that we consider is a source of imminent danger from fire to life, property, or any road.

Anyone receiving the verbal notice should be able to understand:

- that Fire and Emergency has decided that [description of fire hazard] is a source of imminent danger to [life, property, and/or road]
- why the fire hazard is a source of imminent danger
- that Fire and Emergency has arranged for the [removal or destruction] of the fire hazard under [section 68](#) of the Act by [name of contractor] on [date]
- any arrangements for the storage of items removed from the land, and the terms under which the owner/occupier can retrieve those items.

In the event of an actual fire, we can use all of our powers to deal with the emergency, including [sections 42 and 43](#) to remove vegetation or material without telling you.

Regulatory compliance

Fire and Emergency's role

The Act gives Fire and Emergency compliance and enforcement responsibilities, and powers to support interventions in cases of non-compliance. In line with this, we have developed a comprehensive [Risk Reduction Strategy](#), supported by a [Compliance and enforcement policy](#).

Compliance activities generally focus on education and awareness, followed by issuing warnings. If compliance is still an issue, then more formal enforcement powers may be used.

If there are cases of serious or repeated non-compliance, Fire and Emergency may use infringement notices or prosecute. For more information on Fire and Emergency's regulatory compliance policies and procedures and other relevant topics, visit www.fireandemergency.nz/about-us/compliance-and-enforcement.

Contact Fire and Emergency

In case of an emergency please call 111

General enquiries and questions

- Recruitment/volunteering
- Fire safety information
- Fire permits and seasons
- Evacuation schemes
- Request for access to the site of an emergency

[Submit a general enquiry or question](#) or call **04 496 3600**

Lodge a complaint

<https://www.fireandemergency.nz/contact-us/complaints/>

Fire hazards

- Complete [this online form](#)
- You can also call the Fire Information Unit on **0800 336 942**.

Local contacts for this plan

Local contacts specific to this fire plan are included with the area information in this document.

Glossary

4R's - Reducing risk, ensuring response readiness, providing emergency response and making coordinated efforts to enable recovery following an emergency.

Build-up Index (BUI) - A component of the Fire Weather System. This index shows the amount of fuel available for combustion indicating how the fire will develop after the initial spread. It is calculated using the Duff Moisture and Drought Code.

Duff Moisture Code (DMC) - A numerical rating of the average moisture content of loosely compacted organic layers of moderate depth. This code gives an indication of fuel consumption in moderate duff layers and medium-size woody material.

Firebreak - A natural or an artificial physical barrier against the spread of fire from or into any area of continuous flammable material – e.g., a track bulldozed clear of all vegetation.

Fire control - Preventing, detecting, controlling, and putting out fire, and protecting persons and property from fire.

Fire control powers - Our ability to legally require people to stop doing things that increase the risk of a fire, e.g. restricting where and when they can use fire, requiring vegetation to be removed to prevent the spread of fire, etc.

Fire danger – A rating of difficult a fire will be to control once it starts - e.g. low to extreme, low being easy to contain, extreme very difficult to contain.

Fire Danger Rating System - A relative class denoting the potential rates of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed, indicating the relative evaluation of fire danger.

Fire environment - The surrounding conditions, influences, and modifying forces of topography, fuel, and weather that determine fire behaviour.

Fire hazard - Vegetation or other thing on the land that Fire and Emergency reasonably considers likely to endanger persons or property by increasing the risk of the outbreak or spread of fire.

Fire in open air - Fire that isn't in a fireplace in a building or structure, or isn't in something else that Fire and Emergency says is not in the open air.

Fire risk conditions - Weather or other conditions that will, or are likely to, endanger persons or property by increasing the risk of the outbreak or spreading of fire.

Fire seasons – Period when we restrict or prohibit the use of fire in the open air. Areas that are not in a Restricted or Prohibited fire season are in an Open fire season. Can also refer to the October to May period when fires are more likely.

Fire weather – Weather conditions which influence fire ignition, behaviour, and suppression.

Fire Weather System - numerical values that indicate weather and fuel conditions that influence fire behaviour, which feeds into the Fire Danger Rating System.

Grass curing (GC) – A component of the Fire Weather System. Grass goes through a natural process where after flowering/seeding it changes colour as it dies off. This process is known as 'curing.' The degree of curing (%) is the portion of dead grass vs live. Dead grass allows fire to spread easily.

Important Bird Areas (IBAs) - Sites recognised as internationally important for bird conservation and known to support key bird species and other biodiversity. Legal protection, management and monitoring of these crucial sites are all important targets for action. Many bird species may be effectively conserved by these means.

Land cover – What covers the land – trees, grasslands, scrub, residential property.

Land use – How the land is used – e.g. farming, forestry, residential, industrial.

Local area - The area within the boundaries of a local advisory committee that are set in accordance with section 16 of the Act.

Primary production - Livestock farming for dairy, meat and wool. Horticulture, including kiwifruit, apples, avocados, grapes for wine production, vegetables, arable and seed crops, other horticultural crops, cut flowers, and other animal products. Also includes forestry, but this is dealt with separately in fire plans.

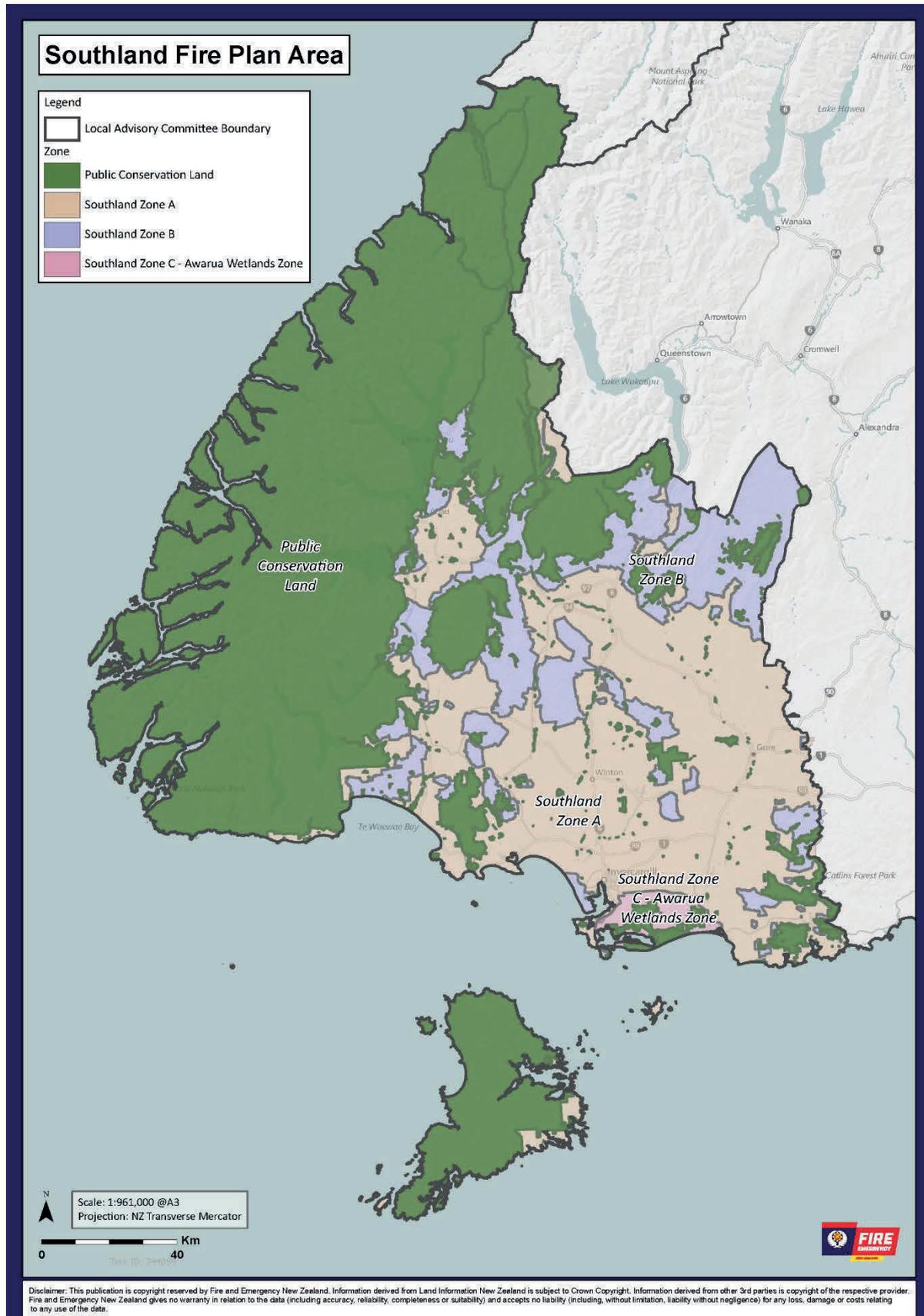
Public conservation land (PCL) – land used for conservation purposes, including National Parks and forest parks. Often managed by Department of Conservation or the regional council.

Remote Automatic Weather Station (RAWS) - Weather station that automatically provides the data used to determine weather and fuel conditions. Results are available from <https://fireweather.niwa.co.nz> and products such as Eco Connect.

Scientific Reserves - Per the Reserves Act 1977, the principal purpose of these reserves is the protection and preservation in perpetuity of areas for scientific study, research, education and the benefit of the country.

Southland information

This section contains the information specific to this fire plan area, including an overview of the area as a whole, and more detailed information for each of the zones within the area.



Area overview

Geography

The total land area of Southland is 3,093,400 hectares.

Politically, Southland proper extends from Fiordland in the west past the Mataura River to the Catlins on the east. To the north, Southland is framed by the Darran and Eyre Mountains. Farther south lies Stewart Island which is separated from the mainland by the Foveaux Strait.

Environment Southland is responsible for the sustainable management of Southland's natural resources - land, water, air and coast in conjunction with three territorial land authorities (Southland District Council, Gore District Council and Invercargill City Council).

Department of Conservation and QEII Trusts administer approximately 1,757,000 hectares or around 57% of the total area.

Pastoral farm land makes up 33.14% of the district.

Southland's western side comprises of Fiordland National Park. It is the largest national park in New Zealand at 1,200,000 hectares or 5% of New Zealand's total land mass with an annual rainfall of around 7-9 metres of rain.

Fiordland's terrain is dominated by mountains, fjords and glacial lakes carved up by glaciations during the last ice age. The region's coast is dotted by several fjords and other sea inlets which stretch from Milford Sound in the north to Preservation Inlet to the south. Farther north and east in Fiordland lie the Darran and Eyre Mountains which are part of the block of schist that extends into neighbouring Central Otago.

Farther east of the Waiau River, the Southland Plains predominate which include some of New Zealand's most fertile farmlands. The region's two principal settlements Invercargill and Gore are located on the plains. The Plains extend from the Waiau River in the west to the Mataura River to the east. It can be divided into three broad areas: the Southland plain proper, the Waimea Plains and the lower Waiau plain to the west near the Waiau river. The southern part of these plains (including the Awarua Plains along the coast east of Bluff) contains much wetland and swamp which contain high environmental and conservation values.

In the far southeast of Southland rises the rough hill country of the Catlins. This area is divided between Southland and the neighbouring Otago region.

Due to the latitude and prevailing wind patterns the area is affected by Foehn winds resulting in wet moist conditions in the Fiordland area but warmer dry winds crossing the province towards the eastern side.

Southland has large areas of exotic forestry interspaced amongst the agricultural land with many conservation areas as well. This complexity of land use and fuel types has steered the zoning for the area to be centred around risk type rather than just geographical climate zones to allow better management of activities in and surrounding those higher risk areas.

Demographics

Demographics help us understand how our communities use fire, and the type of support they might need and how we communicate with them.

Population data (2018 Census):

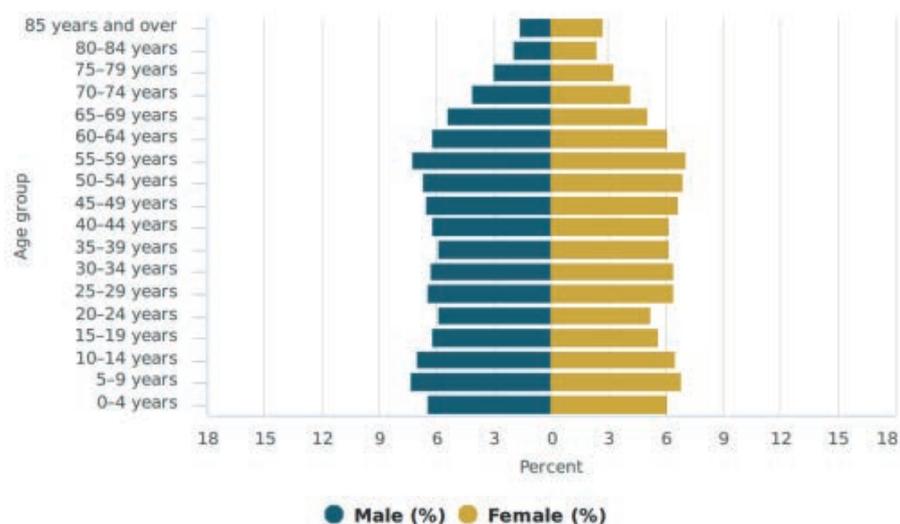
Territorial Local Authority	Usual resident population	Total private dwellings
Southland District	30,864	15,291
Gore District	12,396	5,577
Invercargill City	54,204	23,103
Southland area	97,467	43,977

Ethnicity data:

Territorial Local Authority	European NZer %	Māori %	Pacific %	Asian %	All other %
Southland District	88.1	11.1	1.1	6.2	2.3
Gore District	89	12.9	1.1	3.1	1.2
Invercargill City	85	17.4	3.8	5.7	1.5
Southland area	86.5	14.9	2.6	5.5	2.1

Note: People may identify as more than one ethnicity so % will exceed 100% for a location.

Age and sex of people in Southland Region, 2018 Census



Zones

The zoning in the Southland fire plan was done on a risk-based approach rather than on a purely geographic or climatic approach. Land areas with similar risks have been combined in one zone. This allows a targeted risk management approach during the whole year and not only during the fire season.

Southland is broken up into three zones and the Public Conservation Land (PCL) which is managed by the Department of Conservation (DOC):

- [Southland Zone A](#)
- [Southland Zone B](#)
- [Southland Zone C - Awarua Wetlands](#)
- [Public conservation land](#)

Each zone is described and its relevant trigger thresholds and other factors for changing fire seasons are listed in the [zone information](#).

New Zealand Defence Force

Fire and Emergency has entered into an operational service agreement with the New Zealand Defence Force. The New Zealand Defence Force exercises fire control powers in relation to certain Defence Areas listed in a schedule to the agreement, where they have their own fire plans.

None of the scheduled Defence Areas are in the Southland local area. Any New Zealand Defence Force activities, including training activities, in other Defence Areas are subject to Fire and Emergency's fire permit requirements, though not our other fire control powers.

Frequency of elevated fire danger

Southland Zone B and Southland Zone C - Awarua Wetlands are in permanent restricted status.

When Southland Zone A moves from open to restricted, in line with the other two zones and then when a Prohibited Season is applied across the entire district - all three zones.

Due to the large and variable nature of the topography of Southland a combination of data sources are used to inform the changes in fire seasons.

Remote Automated Weather Stations (RAWS) are used to determine:

- frequency of elevated fire danger,
- the combination of trigger values reaching trigger points,

across any of the climate zones monitored by RAWS.

Scion historical data over 20 years, from 6 representative locations across the district, indicates Southland's experience for these Fire Danger Classes:

Forest Fire Danger Class (FFDC)

- 2.5 of days of very high fire danger
- 1.8 of days of extreme fire danger

Grass Fire Danger Class (GFDC)

- 3.6 of days of very high fire danger
- 0.9 of days of extreme fire danger

Scrub Fire Danger Class (SFDC)

- 26 of days of very high fire danger
- 109 of days of extreme fire danger

Fire history

The known fire history for this zone for wildfires or fires caused by activities regulated by our fire control powers includes:

Year	Fire	Cause
2005	Awarua Siding	Escaped burn off
2008	Papatotara	Undetermined
2009	Holz Road	Escaped burn off
2011	Papatotara	Undetermined
2012	Waituna Wetlands	Undetermined
2015	Lumsden-Dipton Highway	Escaped burn off
2016	Cairn Peak	Spontaneous combustion of skid site
2017	Mount Prospect (1300ha)	Escaped burn off
2018	Tiwai Point	Power lines

Some of these larger vegetation fires in Southland have been caused by escaped land clearing fires, or by failing/falling overhead power lines

Local contacts

Fire and Emergency New Zealand
 Southland District Office
 50 Jed Street
 Invercargill 9810
 Phone (03) 2184114

Schedule of stakeholders

This schedule of stakeholders includes those who should be involved in the creation of these fire plan and their amendments, or consulted before making use of the powers of section 52 of the Fire and Emergency New Zealand Act 2017, or notified when this happens. Zone-level stakeholders are listed with each zone description.

When we say...	What we mean is...
Consult while amending plan	You will have the opportunity for input into the fire plan before it is released for public consultation. Can include workshops and other opportunities to contribute.
Public consultation	You will have the opportunity to comment during the 6-week public consultation period.
Consult during decision making	The plan to change to a prohibited fire season or use section 52 will be discussed with you before it is implemented.
Notify of decision	You will be contacted directly when there is a change to a prohibited fire season, or when section 52 is implemented.
Notify using public channels	You will find out about the change in fire season etc. the same way as other members of the public.

National-level stakeholders

Stakeholders who have an interest in this fire plan area, but are managed at national level.

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Department of Conservation	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
NZ Defence Force	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Environmental Protection Authority	Consulted while creating plan	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Federated Farmers NZ	Public consultation	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Land Information NZ	Consulted while creating plan	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Taituarā - Local Govt Professionals Aotearoa (SOLGM)	Consulted while creating plan	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Local Government NZ	Consulted while creating plan	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Forest Owners Association	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ministry for Primary Industries - Te Uru Rākau and Crown Forestry	Consulted while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Consult during decision making
NZ Farm Forestry Association	Public consultation	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Te Puni Kōkiri	Public consultation	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Ngā Whenua Rāhui	Public consultation	Consult while amending plan	Notify using public channels	Notify using public channels	Notify using public channels
Waka Kotahi NZ Transport Agency	Public consultation	Consult while amending plan	Notify using public channels	Notify using public channels	Consult during decision making
New Zealand Police	Public consultation	Public consultation	Notify of decision	Notify using public channels	Notify using public channels

If your organisation should be involved in fire plans at a national level, please contact us.

Area-level stakeholders

This list is for stakeholders who have an interest across the fire plan area. Stakeholders that have a particular interest in a zone are included in the relevant zone information.

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Department of Conservation <ul style="list-style-type: none"> Invercargill Area Office Te Anau Area Office 	Consulted while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Notify of decision
QE II Trust	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Environment Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Southland District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Gore District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Invercargill City Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Great South	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Emergency Management Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
NZ Police Invercargill	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
St John Ambulance Invercargill	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Federated Farmers Southland	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Local iwi <ul style="list-style-type: none"> Mataura Marae – Mataura Takutai O te Titi – Riverton Te Rau Aroha – Bluff Murihiku Marae – Invercargill Ō Te Ika Rama - Gore 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Local Fire and Emergency career and volunteer brigades	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Forestry companies/managers <ul style="list-style-type: none"> • Ernslaw One • Niagara (incl.Craig Pine); Kennington • Southwood Export; Awarua • Lindsay and Dixon; Tuatapere • Rayonier Matariki Forests • PF Olsen • Blakely Pacific • Wenita Forests • IFS • Log Marketing 	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Fire and Emergency Neighbouring Districts; <ul style="list-style-type: none"> • Otago 	Consulted while creating plan	Consult during decision making	Consult during decision making	Consult during decision making	Consult during decision making
Power and Lines companies <ul style="list-style-type: none"> • Transfield • Powernet 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Rio Tinto – Tiwai Point Aluminium Smelter	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Kiwirail	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels

If your organisation should be involved in fire plans, and have an interest across the whole fire plan area, please contact us about being added to this list.

Zone information

The zoning in the Southland fire plan was done on a risk-based approach rather than on a purely geographic or climatic approach. Land areas with similar risks have been combined in one zone. This allows a targeted risk management approach during the whole year and not only during the fire season.

Southland Zone A

Geography

Southland's Zone A consists of built urban environment of Invercargill and other smaller towns and communities such as Gore, Te Anau and Riverton. It also includes the parts of Stewart Island not managed by Department of Conservation.

Its landscape is flat to rolling and spreads into the foothills of the Takitimu and Eyre Mountains in the North, and centre and into the foothills of Fiordland in the West.

In the South, it boundaries to the Foveaux Strait and in the East, the Catlins.

The zone is mainly made up of heavily modified agricultural land, with the remaining land area containing scrub and other non-productive land cover.

In this zone all of the urban and rural interface is located. This is where the built environment encroaches into the natural environment.

Southland Zone A has a total land area of 9,178.2km².

Demographics

See the demographics in the [area overview](#).

Climate/weather

Southland Zone A is spread across all Southland's land area, so a general description of the main weather patterns is used.

Southland is both the most southerly and most westerly part of New Zealand and generally is the first to be influenced by weather systems moving onto the country from the west or south.

It is well exposed to these systems, although western parts of Fiordland are sheltered from the south and the area east of the western ranges is partially sheltered from the north or northwest.

The region is in the latitudes of prevailing westerlies, and areas around Foveaux Strait frequently experience strong winds, but the winds are lighter inland.

Winter is typically the least windy time of year, as well as for many but not all areas, the driest.

The western ranges, with annual falls exceeding 9000 mm in some parts, are among the rainiest places on earth. The drier eastern lowlands and hills form a complete contrast, with annual falls predominantly between 800 mm and 1200 mm. Dry spells of more than two weeks are not common.

Temperatures are on average lower than over the rest of the country with frosts and snowfalls occurring relatively frequently each year. On average, Southland receives less sunshine than the remainder of New Zealand.

Land cover/ land use

Farmland (pasture, crop), scrub, forest, and urban/built environment

Industry

Industry	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Dairy farming, including several processing plants: <ul style="list-style-type: none"> ○ Fonterra; Edendale ○ Open Country; Awarua ○ Maitai Valley; Gore ● use of machinery – sparks ● relevant operations affected ● processing impacted by activity restrictions on supplier 	☒	☒	☐
Sheep and beef farming, including several meat processing plants: <ul style="list-style-type: none"> ○ Alliance; Lornville ○ Alliance; Maitai ○ Silver Fern Farm; Kennington ○ Blue Sky Meats; Invercargill ○ South Pacific Meats; Awarua ● use of machinery – sparks ● relevant operations affected ● processing impacted by activity restrictions on supplier 	☒	☒	☐
Primary production, including horticulture and agriculture <ul style="list-style-type: none"> ● use of machinery – sparks ● use of fire for land management ● relevant operations affected 	☒	☒	☒
Forestry <ul style="list-style-type: none"> ● use of machinery – sparks ● relevant operations affected ● Use of firebreaks 	☒	☒	☒
Timber industry, including several sawmills and wood chipping plants <ul style="list-style-type: none"> ○ Niagara (incl. Craig Pine); Kennington ○ Southwood Export; Awarua ○ Lindsay and Dixon; Tuatapere ○ Findlater; Ryal Bush ● processing impacted by activity restrictions on supplier 	☒	☒	☐

Lifeline utilities/other infrastructure

Lifeline utility/ other infrastructure	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Manapouri – Tiwai Aluminium Smelter 220 kV transmission line lines <ul style="list-style-type: none"> Protect by applying controls to surrounding areas 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Electricity transmission lines <ul style="list-style-type: none"> Sparking during high winds Use of auto-reclosers limited in high fire danger Recommended vegetation mitigation practices 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roading network <ul style="list-style-type: none"> Sparks from vehicle malfunction, discarded cigarettes Spark causing activities during road maintenance and mowing 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Railway line <ul style="list-style-type: none"> Sparks from passing trains and during track maintenance 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Recreational locations

Southland Zone A has no major recreational locations that historically would be impacted with restrictions under section 52 prohibition.

Cultural and recreational activities and events

Tangata whenua have very strong ties to their whenua (land) and culture, and value being able to use their whenua without unnecessary restrictions.

We will consult with tangata whenua and consider the needs of iwi when making decisions about implementing restrictions or prohibitions with our fire control powers. The relevant iwi for this zone are listed as stakeholders.

Large scale events that might be cancelled because a restriction on activities can have a significant economic impact.

Placing restrictions or prohibitions on fire hazardous activities should not impose any unreasonable restrictions on people living and enjoying recreational activities in this zone.

Cultural and recreational activities and events	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Kingston Flyer steam locomotive, Northern Southland <ul style="list-style-type: none"> Sparks from passing trains and during track maintenance 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cultural and recreational activities and events	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Edendale Crank up Day <ul style="list-style-type: none"> • use of machinery – sparks 	☒	☒	☐
Motorbike Trail rides <ul style="list-style-type: none"> • Access may be restricted during high fire danger 	☒	☒	☐

Special risk areas Currently no known special risk areas in Southland Zone A

Known fire hazards This zone has no long-term fire hazards listed in the Fire Hazard Removal Case Management system.

Frequency of elevated fire danger Scion historical data over a period >20 years from 6 representative locations across Southland Zone A indicates Southland experiences for the below Fire Danger Classes;

Forest Fire Danger Class (FFDC)

- 2.5 of days of very high fire danger
- 1.8 of days of extreme fire danger

Grass Fire Danger Class (GFDC)

- 3.6 of days of very high fire danger
- 0.9 of days of extreme fire danger

Scrub Fire Danger Class (SFDC)

- 26 of days of very high fire danger
- 109 of days of extreme fire danger

Fire history The known fire history for this zone includes:

Year	Fire	Cause
2011	Kingston Flyer (3 ha)	Accidental - machinery
2017	Mount Prospect (1300 ha)	Escaped burn off

Predominant fuel type The predominant fuel type in this zone is grassland and scrub (incl. shelter belts, hedges, and small farm forestry woodlots).

Thresholds

Fire seasons

To determine the thresholds for a Restricted or a Prohibited Fire Season respectively in this zone, a combination of different fire weather indices have been used. This reflects the mix of different fuel types in this zone.

A change in fire season is considered when more than one value in the table below is exceeded and forecasted conditions indicate a continued trend across the climatic zones represented by the RAWs in Southland Zone A.

Fire Weather Indices	Fire season status		
	Open	Restricted	Prohibited
Duff Moisture Code (DMC)	0 - 11	>/= 12	>/= 27
Drought Code (DC)	0 - 119	>/= 120	>/= 225
Built-up Index (BUI)	0 - 19	>/= 20	>/= 40
Grass Curing (GC)	< 60%	>/= 60%	>/= 60%

Prohibition on fires in open air (section 52)

We can use the same Fire Weather System trigger thresholds for prohibiting fires in the open air under section 52 as we do for changing to a prohibited fire season, but use section 52 when the fire risk conditions are not expected to last long enough to make changing to a prohibited fire season practical.

If a zone is already in a restricted fire season, the following thresholds when likely to be exceeded across all four indicators, are used as triggers for implementing a total fire ban under section 52.

Fire Weather Indices	Fire season status
	Section 52 prohibition (Total fire ban)
Duff Moisture Code (DMC)	>/= 86
Wind speed	>/= 40 km/h
Initial Spread Index (ISI)	>/= 18
Fire Weather Index (FWI)	>/= 24

Prohibitions or restrictions on activities (section 52)

Localised trigger thresholds for applying section 52 to activities have not yet been developed, however there are some local mitigations used to reduce the need to implement it.

Forestry operations

In Southland we have Forestry Agreements with our major forestry stakeholders in place and have established the document Te Kei Southern District Best Practise Guidelines for Fire Mitigation in Forest Operations to ensure best practise is clearly understood and implemented.

[Forest Fire Risk Management Guidelines](#) contain advice on mitigating the risks.

Operation of steam powered machinery (train, traction engine)

Consider suspending this activity under section 52 in times of extreme fire danger.

Powerline auto-reclosers

We are currently consulting with Powernet and Transfield on protocols for Southland.

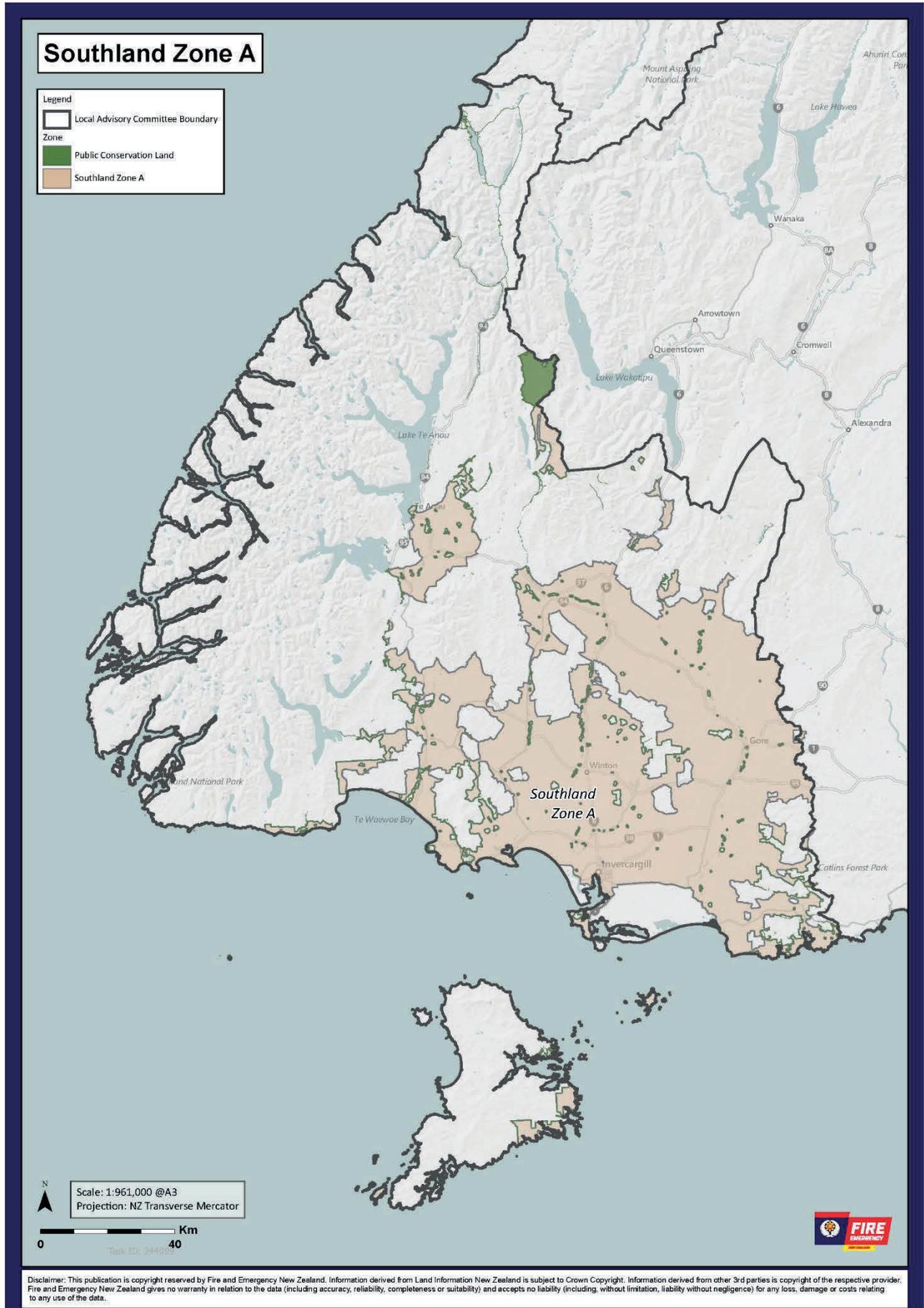
**Representative
remote automated
weather stations**

The Remote Automated Weather Stations (RAWS) used to determine whether we have reached the trigger thresholds are:

Barnhill	Milford Sound	Tapanui
Blackmount	Otama	Tisbury
Edendale	Slopedown	Tuatapere
Garston	Stewart Island	Wreys Bush
Glendhu	Tanner Road	Wilderness

We will consider the forecast for these locations when declaring or revoking a fire season.

Southland Zone A map



Southland Zone A stakeholders

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Department of Conservation <ul style="list-style-type: none"> Invercargill Area Office Te Anau Area Office 	Consulted while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Notify of decision
QE II Trust	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Environment Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Southland District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Gore District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Invercargill City Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Great South	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Emergency Management Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
<ul style="list-style-type: none"> NZ Police Invercargill 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
St John Ambulance Invercargill	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Federated Farmers Southland	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Local iwi <ul style="list-style-type: none"> Mataura Marae – Mataura Takutai O te Titi – Riverton Te Rau Aroha – Bluff Murihiku Marae – Invercargill O Te Ika Rama - Gore 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Local Fire and Emergency career and volunteer brigades	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Fire and Emergency Neighbouring Districts; <ul style="list-style-type: none"> Otago 	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Power and Lines companies <ul style="list-style-type: none"> Transfield Powernet 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Kiwirail	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels

If your organisation should be involved in fire plans, and have an interest in this zone, please contact us about being added to this list.

Southland Zone B

Geography

Southland's Zone B is in an all year Restricted Fire Season, due to an identified elevated risk level in those land areas with potential catastrophic outcome, if an unwanted fire should break out.

The zone consists mainly of commercial plantation forest blocks (including surrounding buffer zones) and land areas that are located in the high country.

An all year restricted fire season allows Fire and Emergency to engage actively with landowners/managers managing the present risk on a day-by-day and case-by-case basis.

Southland Zone B has a total land area of 4,118.5 km²

Demographics

See the demographics in the [area overview](#).

Climate/weather

Southland Zone B is spread across all Southland's land area, so a general description of the main weather patterns is used.

Southland is both the most southerly and most westerly part of New Zealand and generally is the first to be influenced by weather systems moving onto the country from the west or south.

It is well exposed to these systems, although western parts of Fiordland are sheltered from the south and the area east of the western ranges is partially sheltered from the north or northwest.

The region is in the latitudes of prevailing westerlies, and areas around Foveaux Strait frequently experience strong winds, but the winds are lighter inland.

Winter is typically the least windy time of year, as well as for many but not all areas, the driest.

The western ranges, with annual falls exceeding 9000 mm in some parts, are among the rainiest places on earth. The drier eastern lowlands and hills form a complete contrast, with annual falls predominantly between 800 mm and 1200 mm. Dry spells of more than two weeks are not common.

Temperatures are on average lower than over the rest of the country with frosts and snowfalls occurring relatively frequently each year. On average, Southland receives less sunshine than the remainder of New Zealand.

Land cover/ land use

Commercial plantation forests (exotic species), forests (mainly native species), pasture, wilding pines, and tussock and scrub.

Industry	Industry	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
	Forestry companies/managers <ul style="list-style-type: none"> ○ Ernslaw One ○ Niagara (incl.Craig Pine); Kennington ○ Southwood Export; Awarua ○ Lindsay and Dixon; Tuatapere ○ Findlater; Ryal Bush ○ Rayonier Matariki Forests ○ PF Olsen ○ Blakely Pacific ○ Wenita Forests ○ IFS ● use of machinery – sparks ● relevant operations affected ● Use of firebreaks 	☒	☒	☒
	Primary production, including horticulture and agriculture (sheep and beef) <ul style="list-style-type: none"> ● use of machinery – sparks ● use of fire for land management ● relevant operations affected 	☒	☒	☒
Lifeline utilities/other infrastructure	Lifeline utility/ other infrastructure	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
	Electricity transmission lines <ul style="list-style-type: none"> ● Sparking during high winds ● Use of auto-reclosers limited in high fire danger ● Recommended vegetation mitigation practices 	☒	☒	☐
	Roothing network <ul style="list-style-type: none"> ● Sparks from vehicle malfunction, discarded cigarettes ● Spark causing activities during road maintenance and mowing 	☒	☒	☐
	White Hill Wind Farm <ul style="list-style-type: none"> ● Protect by applying controls to surrounding areas 	☒	☐	☒

Recreational locations

Hunting/access permits to lands in Southland Zone B may be cancelled during extreme fire danger.

Cultural and recreational activities and events

Tangata whenua have very strong ties to their whenua (land) and culture, and value being able to use their whenua without unnecessary restrictions.

We will consult with tangata whenua and consider the needs of iwi when making decisions about implementing restrictions or prohibitions with our fire control powers. The relevant iwi for this zone are listed as stakeholders.

Large scale events that might be cancelled because a restriction on activities can have a significant economic impact.

Placing restrictions or prohibitions on fire hazardous activities should not impose any unreasonable restrictions on people living and enjoying recreational activities in this zone.

Cultural and recreational activities and events	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Southland Rally Sprint Racing <ul style="list-style-type: none"> Car fires and sparks from vehicle malfunction 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Trail Rides	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural cooking, e.g. Hāngī	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fireworks <ul style="list-style-type: none"> Use may be prohibited during high fire danger 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Special risk areas

All of Southland Zone B is considered a special risk zone, which is why it is its own zone in this fire plan.

Due to the nature of the activities (e.g. logging operation, general use of heavy machinery, fire as land management tool, etc.) the risk of an unwanted fire is elevated in this zone.

The plantation forests are all listed as Special Response Zones in the Southern District Interim Fire Response Plan, which lists pre-determined responses depending on the fire danger level.

Known fire hazards

Due to the large amount of active and ongoing commercial forestry in this zone numerous areas of known hazard do exist, such as skid sites.

However, these are managed in conjunction with the relevant forestry company specific to each block.

Frequency of elevated fire danger

Scion historical data over a period >20 years from 6 representative locations across Southland Zone B indicates Southland experiences for the below Fire Danger Classes;

Forest Fire Danger Class (FFDC)

- 2.5 of days of very high fire danger
- 1.8 of days of extreme fire danger

Grass Fire Danger Class (GFDC)

- 3.6 of days of very high fire danger
- 0.9 of days of extreme fire danger

The Scrubland Fire Danger Class does not apply in this zone.

Fire history

The known fire history for this zone includes:

Year	Fire	Cause
2004	Papatotara (150ha)	Undetermined
2011	Papatotara (80ha)	Undetermined
2015	Lumsden-Dipton (100ha)	Escaped burn off
2017/18	Cairn Peak (40ha)	Self-combustion skid site fire

Predominant fuel type

The predominant fuel type in this zone is forestry (plantation forests, exotic species) including some adjacent farmland (buffer area), and in the high country areas pasture, tussock, native bush, and some wilding pine.

Thresholds

Fire seasons

Due to an elevated risk level in these land areas, Southland Zone B is in a restricted fire season when it is not in a prohibited fire season.

To determine the threshold for a Prohibited Fire Season, a combination of different fire weather indices has been used. This reflects the mix of different fuel types in this zone.

A change in fire season is considered when more than one value in the table below is exceeded and forecasted conditions indicate a continued trend across the climatic zones represented by the RAWs in Southland Zone B.

Fire Weather Indices	Fire season status
	Prohibited
Duff Moisture Code (DMC)	>/= 27
Drought Code (DC)	>/= 225
Built-up Index (BUI)	>/= 40
Grass Curing (GC)	>/= 60%

Prohibition on fires in open air (section 52)

We can use the same Fire Weather System trigger thresholds for prohibiting fires in the open air under section 52 as we do for changing to a prohibited fire season, but use section 52 when the fire risk conditions are not expected to last long enough to make changing to a prohibited fire season practical.

Fire Weather Indices	Fire season status
	Section 52 prohibition (Total fire ban)
Duff Moisture Code (DMC)	>/= 86
Wind speed	>/= 40 km/h
Initial Spread Index (ISI)	>/= 18
Fire Weather Index (FWI)	>/= 24

Prohibitions or restrictions on activities (section 52)

Localised trigger thresholds for applying section 52 to activities have not yet been developed, however there are some local mitigations used to reduce the need to implement it.

Forestry operations

In Southland we have Forestry Agreements with our major forestry stakeholders in place and have established the document Te Kei Southern District Best Practise Guidelines for Fire Mitigation in Forest Operations to ensure best practise is clearly understood and implemented.

[Forest Fire Risk Management Guidelines](#) contain advice on mitigating the risks.

Powerline auto-reclosers

We are currently Consulting with Powernet and Transfield on protocols for Southland.

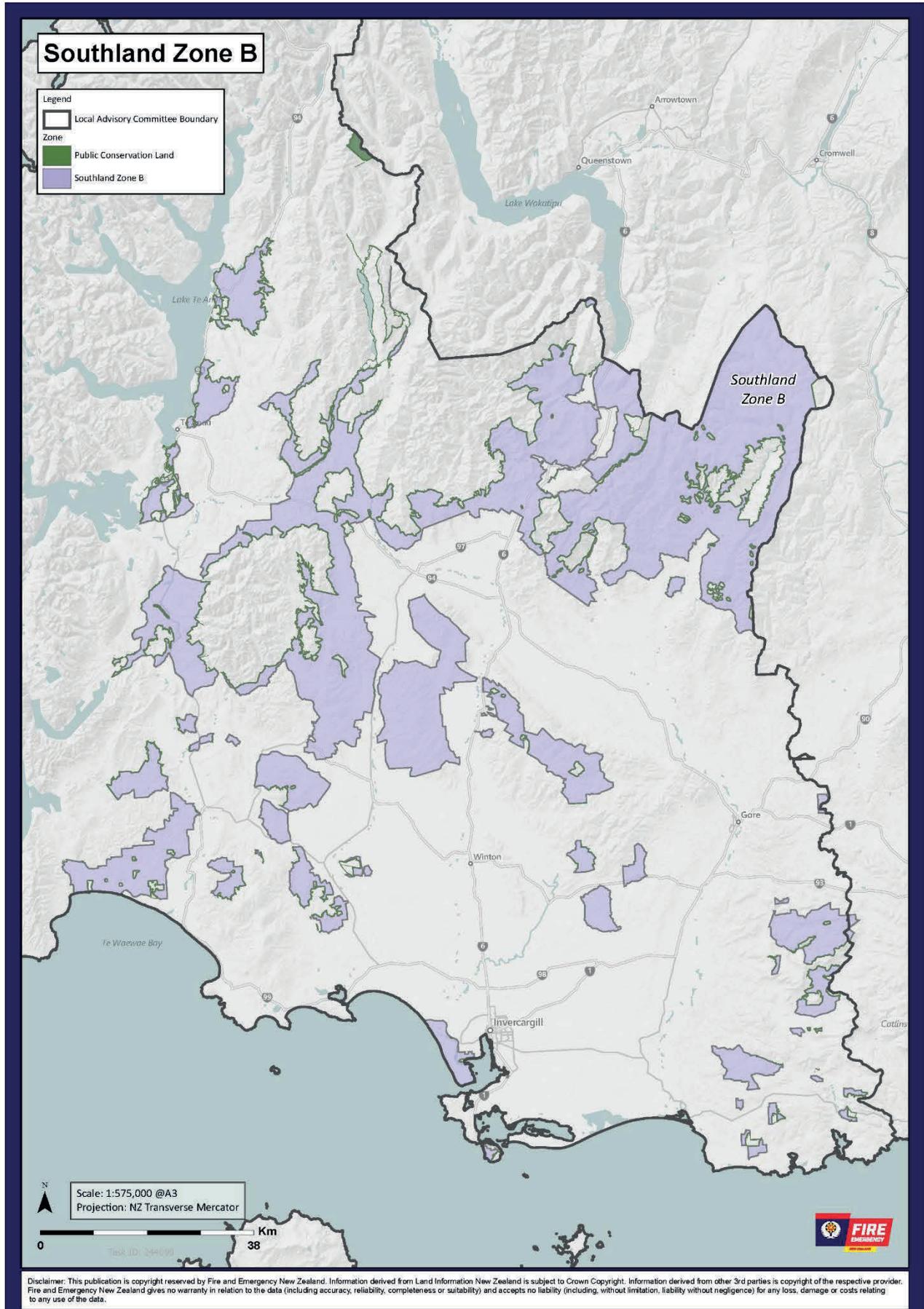
Representative remote automated weather stations

The Remote Automated Weather Stations (RAWS) used to determine whether we have reached the trigger thresholds are:

Barnhill	Milford Sound	Tapanui
Blackmount	Otama	Tisbury
Edendale	Slopedown	Tuatapere
Garston	Stewart Island	Wreys Bush
Glendhu	Tanner Road	Wilderness

Due to the geographical spread of the zone, a combination of stations are used to indicate an increase in danger or trend toward an area approaching higher danger to inform the requirement to move into a prohibited fire season in this zone.

Southland Zone B map



Southland Zone B stakeholders

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Anyone else with relevant interest in this zone (eg council), major landowners who have lands adjoining the forests etc	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Rayonier Matariki	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Southwood Export	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ernslaw One	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
PF Olsen	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Southern Forest	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Wenita	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Log Marketing	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Meridian – White Hill Windfarm	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Environment Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Gore District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Southland District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Invercargill City Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Department of Conservation	Consulted while creating plan	Consult during decision making	Notify of decision	Notify of decision	Notify of decision

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Iwi	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Local Fire and Emergency career and volunteer brigades	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Power and Lines companies <ul style="list-style-type: none"> • Transpower • Powernet 	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify via public channels
Fire and Emergency Neighbouring District; <ul style="list-style-type: none"> • Otago 	Consulted while creating plan	Consult during decision making	Consult during decision making	Consult during decision making	Consult during decision making
Federated Farmers Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels

If your organisation should be involved in fire plans, and have an interest in this zone, please contact us about being added to this list.

Southland Zone C - Awarua Wetlands

Geography

Southland Zone C - Awarua Wetlands, located South-East of Invercargill, consists of one of the largest remaining wetland complexes in New Zealand.

The whole land area of Southland Zone C - Awarua Wetlands is in an all year Restricted Fire Season as the Awarua Wetlands with the Waituna Lagoon are hugely important for its biological diversity and cultural values.

The terrain is mainly flat to slightly rolling. The lagoon and the surrounding wetlands was one of the first in New Zealand to be officially recognised as a wetland of international importance.

A 3,500 ha section of the wetlands, known as the Waituna Wetland Scientific Reserve, was listed as part of New Zealand's obligations when signing the Ramsar Wetland Convention; an international convention that promotes the wise or sustainable use of wetlands.

The site includes four major wetland types: coastal lagoons, freshwater swamps, extensive peatlands, and estuaries. Each ecosystem is unique and maintained by different ecological processes.

The Awarua Wetlands are mainly bog rather than swamp. Bogs are rain-fed and are characterised by saturated, infertile peat soils.

Southland Zone C - Awarua Wetlands has a total land area of 264.7 km².

Southland Zone C – Awarua Wetlands incorporates a large section of public conservation land, administered by the Department of Conservation.

Demographics

See the demographics in the [area overview](#).

This zone is very sparsely populated. Most of the zone is low-lying wetland with some farming on the inland fringes.

Climate/weather

This zone is subjected to fairly constant cold salt-laden winds from the south and west with an average annual rainfall of 1,100mm.

Because of the land contour, severe coastal conditions are restricted to a narrow zone of two to three kilometres, but on the plains around Invercargill and to the east, this zone extends up to 35 km inland.

Land cover/ land use

Grass, scrub, forest, bog and peat.

Industry

Industry	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Primary production, including horticulture and agriculture <ul style="list-style-type: none"> • use of machinery – sparks • use of fire for land management • relevant operations affected 	☒	☒	☒

Industry	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Forestry <ul style="list-style-type: none"> • use of machinery – sparks • relevant operations affected • Use of firebreaks 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tiwai Aluminium Smelter <ul style="list-style-type: none"> • Protect by applying controls to surrounding areas 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifeline utility/ other infrastructure	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Tiwai Aluminium Smelter 220kV transmission lines <ul style="list-style-type: none"> • Sparking during high winds • Use of auto-reclosers limited in high fire danger • Recommended vegetation mitigation practices 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lifeline utilities/other infrastructure

Recreational locations

Access to Waituna Lagoon or Awarua Bay (e.g. Whitebaiting, fishing, duck shooting etc.) may be restricted.

Cultural and recreational activities and events

Tangata whenua have very strong ties to their whenua (land) and culture, and value being able to use their whenua without unnecessary restrictions.

We will consult with tangata whenua and consider the needs of iwi when making decisions about implementing restrictions or prohibitions with our fire control powers. The relevant iwi for this zone are listed as stakeholders.

Large scale events that might be cancelled because a restriction on activities can have a significant economic impact. There are no known events of this type in this zone.

Placing restrictions or prohibitions on fire hazardous activities should not impose any unreasonable restrictions on people living and enjoying recreational activities in this zone.

Special risk areas

This is a separate zone in the fire plan area due to the values at risk with the wetlands and the Tiwai Aluminium Smelter.

Known fire hazards

There are no long-term fire hazards in this zone listed in the Fire Hazard Removal Case Management system.

Frequency of elevated fire danger

Scion historical data over a period >20 years from 6 representative locations across Southland Zone B indicates Southland experiences for the below Fire Danger Classes:

Fire danger class	Frequency
Forest Fire Danger Class (FFDC)	2.5 of days of very high fire danger 1.8 of days of extreme fire danger
Grass Fire Danger Class (GFDC)	3.6 of days of very high fire danger 0.9 of days of extreme fire danger
Scrub Fire Danger Class (SFDC)	26 of days of very high fire danger 109 of days of extreme fire danger

Fire history

The known fire history for this zone includes:

Year	Fire	Cause
2005	Awarua Siding Road (1400 ha)	Escaped burn off
2009	Holz Road (600 ha)	Escaped burn off
2012	Awarua Wetlands (400 ha)	Undetermined
2018	Tiwai Point (340 ha)	Power lines
2019	Tiwai Point (34 ha)	Undetermined

Predominant fuel type

This zone is a mixture of grasslands, scrub, plantation forest, and peat bog.

Thresholds

Fire seasons

Due to the elevated risk level and significant environmental values in this land area, Southland Zone C - Awarua Wetlands is in a restricted fire season when it is not in a prohibited fire season

To determine the thresholds for a Prohibited Fire Season, a combination of different fire weather indices has been used. This reflects the mix of different fuel types in this zone.

A change in fire season is considered when more than one value in the table below is exceeded and forecasted conditions indicate a continued trend across the climatic zones represented by the RAWs around Southland Zone C – Awarua Wetlands.

Fire Weather Indices	Fire season status
	Prohibited
Duff Moisture Code (DMC)	>= 27
Drought Code (DC)	>= 225
Built-up Index (BUI)	>= 40
Grass Curing (GC)	>= 60%

Prohibition on fires in open air (section 52)

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Powerline auto-reclosers

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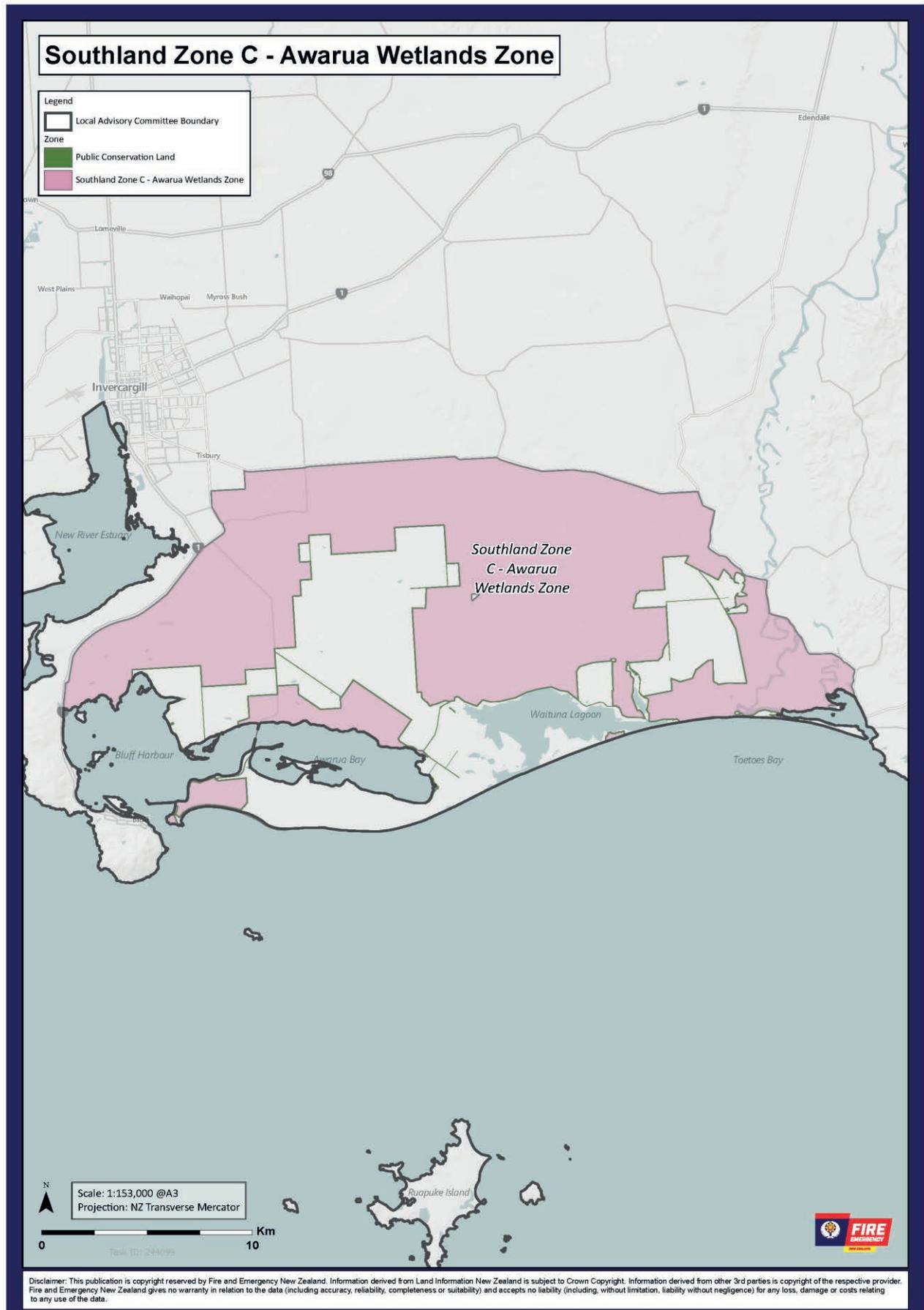
Representative remote automated weather stations

The Remote Automated Weather Stations (RAWS) used to determine whether we have reached the trigger thresholds are:

Barnhill	Milford Sound	Tapanui
Blackmount	Otama	Tisbury
Edendale	Slopedown	Tuatapere
Garston	Stewart Island	Wreys Bush
Glendhu	Tanner Road	Wilderness

We will consider the forecast for these locations when declaring or revoking a fire season.

Southland Zone C – Awarua Wetlands map



Southland Zone C – Awarua Wetlands stakeholders

Include stakeholders that are relevant to this zone only– repeat this table and adjust for each zone – not all your area stakeholders will be represented in each zone – but think about neighbours to the zone as well.

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Department of Conservation • Invercargill Area Office	Consult while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Notify of decision
QE II Trust	Public consultation	Public consultation	Notify via normal channels	Notify via normal channels	Notify via normal channels
Environment Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Southland District Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Invercargill City Council	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Great South	Public consultation	Public consultation			
Emergency Management Southland	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
NZ Police Invercargill	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
St John Ambulance Invercargill	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Federated Farmers Southland			Notify via normal channels	Notify via normal channels	Notify via normal channels

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Local iwi <ul style="list-style-type: none"> Te Rau Aroha – Bluff Murihiku Marae – Invercargill 	Public consultation	Public consultation	Notify via normal channels	Notify via normal channels	Notify via normal channels
Local Fire and Emergency career and volunteer brigades	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Forestry companies/managers <ul style="list-style-type: none"> Niagara (incl. Craig Pine); Kennington Southwood Export; Awarua Rayonier Matariki Forests Wenita Forests IFS Log Marketing	Consult while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Power and Lines companies Transfield Powernet	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Rio Tinto – Tiwai Point Aluminium Smelter	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Kiwirail	Public consultation	Public consultation	Notify of decision	Notify of decision	Notify of decision
Public	Public consultation	Public consultation	Notify via normal channels	Notify via normal channels	Notify via normal channels
This list can be added to during public consultation					

Southland public conservation land

Geography

Public conservation land (PCL) in Southland is extensive and accounts for 18,395.8 km² or roughly 57% of the total area.

The main parks are:

- Fiordland National Park
- Conservation Area - Mavora Lakes (Manawapōpōre/Hikuraki)
- Conservation Area - Snowdon Forest
- Burwood Bush (Red Tussock) Scientific Reserve
- Eyre Mountains/Taka Ra Haka Conservation Park
- Takitimu Conservation Area
- Conservation Area - Dean Forest
- Conservation Area - Rowallan Forest
- Conservation Area - Longwood Forest
- Conservation Area - Hokonui Forest
- Forest Hill Scenic Reserve
- Conservation Area - Seaward Moss
- Waituna Wetlands Scientific Reserve
- Conservation Area - Tiwai Spit
- Catlins Conservation Park
- Rakiura National Park

Climate/weather

Southland is both the most southerly and most westerly part of New Zealand and generally is the first to be influenced by weather systems moving onto the country from the west or south.

It is well exposed to these systems, although western parts of Fiordland are sheltered from the south and the area east of the western ranges is partially sheltered from the north or northwest.

The region is in the latitudes of prevailing westerlies, and areas around Foveaux Strait frequently experien

ce strong winds, but the winds are lighter inland.

Winter is typically the least windy time of year, as well as for many but not all areas, the driest.

The western ranges, with annual falls exceeding 9000 mm in some parts, are among the rainiest places on earth. The drier eastern lowlands and hills form a complete contrast, with annual falls predominantly between 800 mm and 1200 mm. Dry spells of more than two weeks are not common.

Temperatures are on average lower than over the rest of the country with frosts and snowfalls occurring relatively frequently each year. On average, Southland receives less sunshine than the remainder of New Zealand.

Land cover

Grasslands and tussock, native scrub, native forest.

Special risk areas

Special risk area	Contributes to increased risk of fire in high risk conditions	Affected by use of fire control measures	Needs to be protected by using fire control measures
Burwood Takahe Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Waituna Lagoon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
West Arm Power Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Known fire hazards There are no long-term fire hazards in this zone included in the Fire Hazard Removal Case Management System.

Fire history:

The known fire history in public conservation lands zone includes:

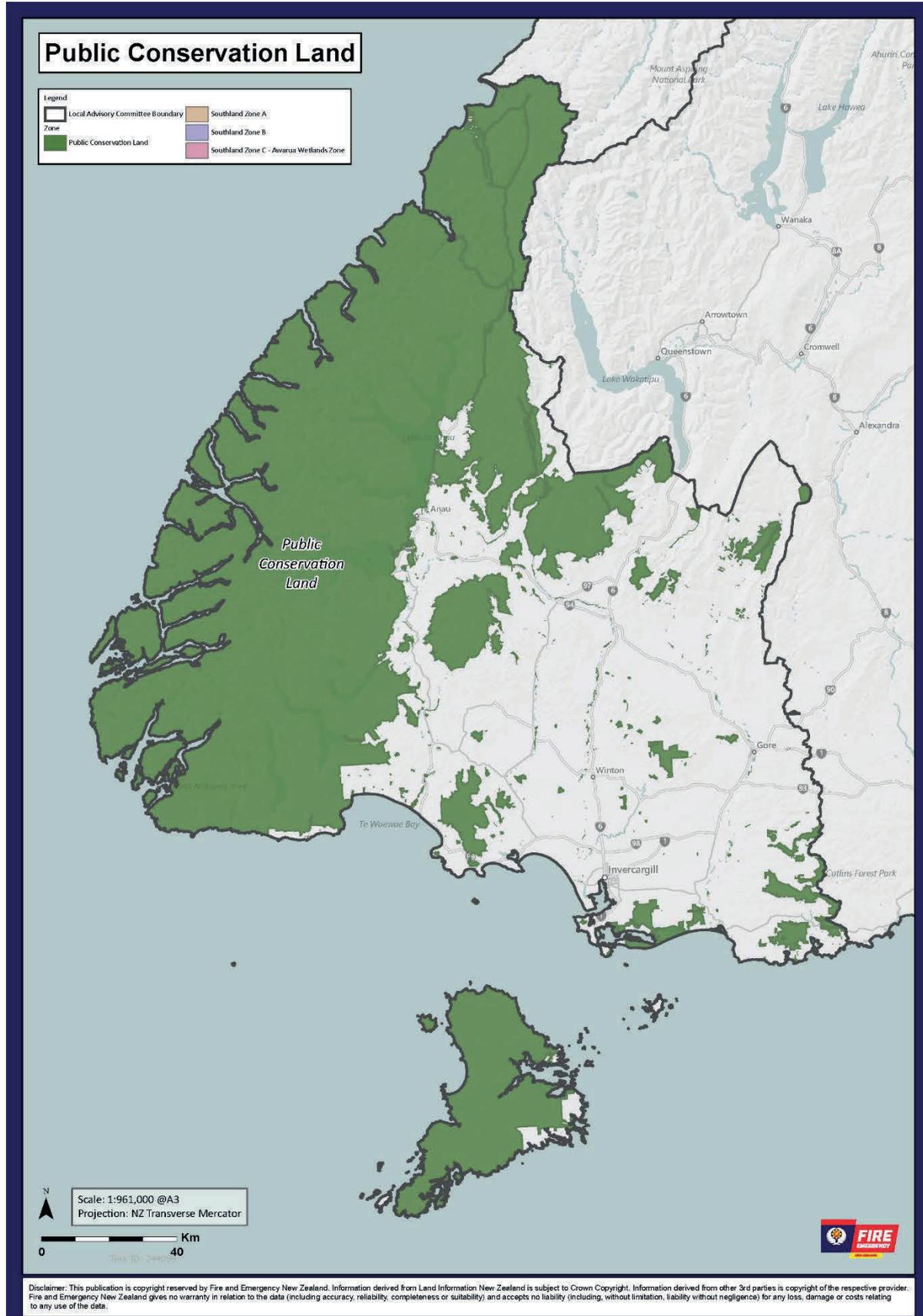
Year	Fire	Cause
2012	Doubtful Island (1 ha)	Escaped campfire
2017	Mount Titaroa (10 ha)	Suspected lightning strike

Thresholds**Restricted seasons year round**

Due to the values at risk, public conservation lands are kept in a restricted fire season when they are not in a prohibited fire season. Even when the surrounding zone goes to an open fire season, public conservation land will remain in a restricted fire season.

Thresholds for declaring or revoking a prohibited fire season are the same as the thresholds for the surrounding zone.

Southland public conservation land map



Appendix 1 – Land cover

