Fire Plan for

Nelson-Tasman, Te Ihu

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 Region Manager, Te Ihu

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Document information

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Approval

Full Name: Paul Henderson

Title: Region Manager, Te Ihu

Date: 27 July 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 website, the fire permit application system, these fire plans, and additional information on our public website – 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: • 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: • 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: • 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: • 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: • 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: • 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: • 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: • 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: • 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.

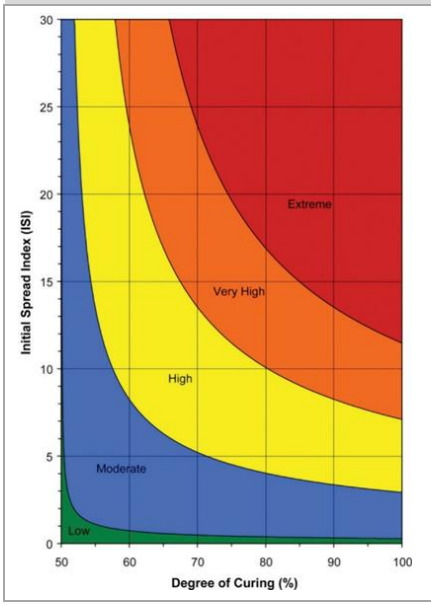
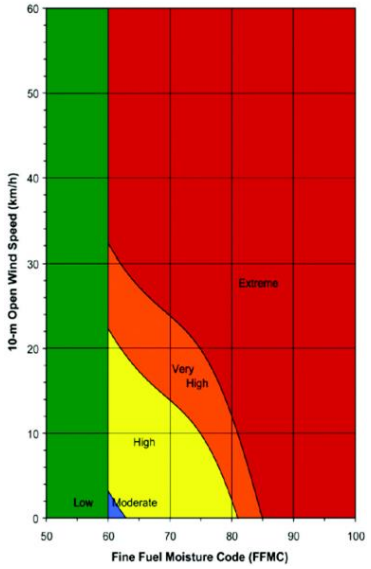
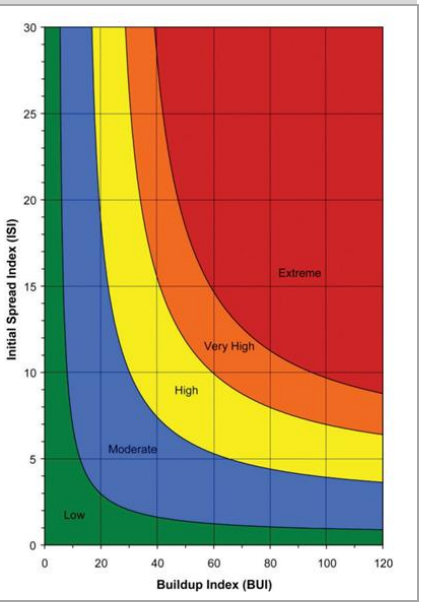
The trigger thresholds make use of:

- 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.

Grassland fire danger	Scrubland fire danger	Forest fire danger
		

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: • 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	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.
Charcoal barbeques or grills	Barbeques or grills that use either charcoal briquettes or natural lump charcoal as their fuel source. Condition: • Don't use on an apartment balcony, deck, under a roof overhang or within other enclosed areas. *If you cannot meet this condition, you must apply for a permit.*
Wood-fire pizza oven	Also known as wood ovens, these are ovens that use wood fuel for cooking. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Chiminea	A freestanding front-loading fireplace or oven with a bulbous body, and usually has a vertical smoke vent or chimney. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Hāngī, umu, braai and lovo cultural cooking fires	Conditions: Your fire area must be less than two 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 cultural fire, such as a water hose, mechanical digger, or water sprayer. Find out more about the safe use of cultural fires. *If you cannot meet these conditions, you must apply for a permit.*

Fire type	Description and conditions
Braziers	A container for hot coals – usually an upright standing or hanging metal bowl or box. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Fire pits/bowls	A pit dug in the ground made from stone, brick or metal or a bowl on an upright stand, for recreational use. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Open drum and manufactured incinerators	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. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*

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	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.
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	Fires lit in the backcountry (over one-hour walking time from the nearest road end) of public conservation land. Conditions: The fire must not be: • 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. Find out more about the safe use of campfires.

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	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.
Charcoal barbeques or grills	Barbeques or grills that use either charcoal briquettes or natural lump charcoal as their fuel source. Condition: Don't use on an apartment balcony, deck, under a roof overhang or within other enclosed areas. *If you cannot meet this condition, you must apply for a permit.*
Wood-fire pizza oven	Also known as wood ovens, these are ovens that use wood fuel for cooking. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Chiminea	A freestanding front-loading fireplace or oven with a bulbous body, and usually has a vertical smoke vent or chimney. Conditions: • 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. *If you cannot meet these conditions, you must apply for a permit.*
Hāngī, umu, and lovo and cultural cooking fires	Conditions: Your fire area must be less than two square metres. 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 cultural fire, such as a water hose, mechanical digger, or water sprayer. Find out more about the safe use of cultural fires. *If you cannot meet these conditions, you must apply for a permit.*

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 vegetation, 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 *Fire hazard removal notice (s 65)*. Consider if an *Imminent danger notice (s 68)* is appropriate.
15, 16	Consider issuing a *Fire hazard removal notice (s 65)*, 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 the 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. primary production (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.

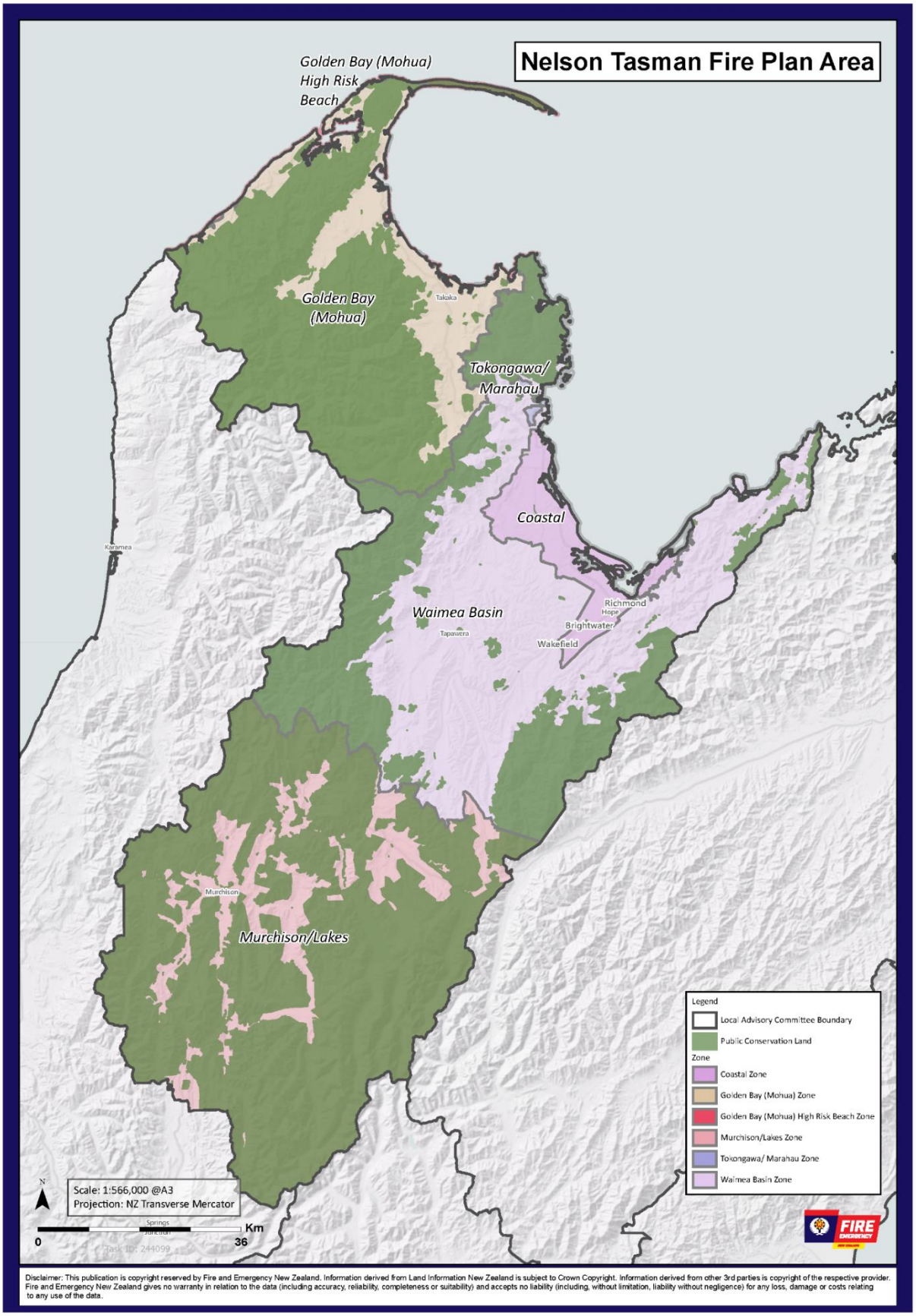
Public conservation land (PCL) – land used for conservation purposes, including National Parks and forest parks. Often managed by Department of Conservation or the regional council.

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.

Nelson-Tasman 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 Nelson - Tasman Fire Plan area consists of all the lands within the boundaries of the Tasman District and Nelson City Council Unitary Authorities. This includes all privately owned and publicly managed lands within the plan boundaries.

The Tasman district covers 9,786 square kilometres, with the Nelson district covering 422.19 square kilometres.

The district has three distinctive mountain ranges, Richmond Range to the east, Arthur Range dividing Tasman Bay from Golden Bay and the Tasman Range to the west of Golden Bay.

The Richmond and Arthur Ranges run in a SW to NE direction that greatly influences the westerly weather systems for the Waimea and Coastal zones. Strong SW and W tending systems will strike these mountain ranges, with precipitation dropping on the highlands and strong low relative humidity winds, like the Canterbury nor 'west Föhn wind resulting. When these weather events coincide with hot summer temperatures, they accelerate the drying effect on vegetation in the district and will raise fire danger levels to very high to extreme.

The Tasman Range which runs along the western boundary of Golden Bay, does not present as significant a barrier to incoming weather systems from the south or west as the range does in the Tasman Bay area. This results in increased precipitation occurring in Golden Bay with fire danger levels often lagging those found in Tasman Bay.

The sea-breeze effect is felt in both bays over the warmer months, often prevailing in the early afternoons inland to approximately 10km from the coast.

The rolling hill country of the Moutere, contains much of the district's exotic plantations, extends south from Waimea toward St Arnaud. The hills are fairly uniform in height, ranging from 200 to 500 metres with numerous valleys that transition from gentle sloping to steep sloping at their base. Coupled with the exposure to the dry Föhn winds and with aspects to all-day sun, this area often records a higher fire danger risk to this largely exotic forested area.

Able Tasman National Park is New Zealand's smallest national park and sits between Tasman Bay and Golden Bay. This rolling hill country covered in coastal indigenous forests and highly volatile native scrublands. Sitting at the northern end of the Tasman Range, it receives a similar climate to that found in the Tasman Bay.

The Nelson Lakes area is considered an alpine environment, located in a wide valley and surrounded by a large mountainous environment. As this valley runs in a generally SW to NE direction, strong low humidity winds can quickly dry out the alpine vegetation creating high fire risk conditions similar to inland Marlborough during the summer months.

The Area has five major rivers the Buller, Motueka, Aorere, Takaka and Wairoa. There are three significant lakes, Rotoiti and Rotorua in the Nelson Lakes National Park, and Cobb Lake in the Upper Golden Bay area – this is a manmade reservoir.

Demographics

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

Demographics are included in the relevant zone information.

Zones

Because the different fire risk conditions that exist in different parts of the fire plan area, the area is divided into a number of different zones to allow for appropriate fire control measures to be applied locally:

- Waimea Basin
- Tokongawa / Marahau
- Coastal
- Golden Bay
- Golden Bay high value beach
- Murchison / Lakes

In December 1992 the then Fire Authorities that existed in the Nelson Tasman District met and agreed to place the Nelson Tasman area under a year-round restricted fire season, until such time as the triggers as stated in the fire plans of the time were reached and required a prohibited season to be declared.

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 Nelson-Tasman local area. Any New Zealand Defence Force activities, including training activities, in other Defence Areas in the local area are subject to Fire and Emergency's fire permit requirements, though not our other fire control powers.

Frequency of elevated fire danger

On average, the Nelson Tasman area experiences:

- 48 days of extreme fire danger
- 64 days of very high fire danger

Fire history

The known large (+500ha) fire history for this area includes:

Year	Fire	Cause
2019	Pigeon Valley Complex – 2300ha	Agricultural Discing and Arson
2009	Glenhope fire – 600ha	Disposal of fireplace ashes
2004	Irvines fire – 200ha	Suspected Arson
1997	Tasman fire – 535 ha	Suspected Arson
1981	Hira – 1972 ha	Suspected Power Lines

Local contacts

Email: Firepermit.NelsonTasman@fireandemergency.nz

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
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Nelson City Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Te Ātiawa o Te Waka-a-Māui	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Rārua	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Kōata	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Toa Rangatira	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Kuia	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Apa ki te Rā Tō	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	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
Rangitāne o Wairau	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
One-Forty-One Plantations Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman Pine Forests Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
PF Olsen Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Department of Conservation national park land managers and conservancy in general	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Federated farmers	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Agricultural contractor's association	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Contractors Federation	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
NZ Apples and Pears	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Nelson Mountain Bike Club	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	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
Federated Mountain Club	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Tourism industry	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Public	Public consultation	Public consultation	Notify using public channels	Notify using public channels	Notify using 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

Waimea Basin

Geography

The Waimea Basin Zone stretches from the Mount Arthur Range in the West to the Richmond range in the east.

Bordered on the North by the Coastal Zone and South by the Murchison / Lake Zone.

There are two National Parks in the Zone, the Kahurangi National Park from the Mt Arthur range down to the eastern boundary and all of Abel Tasman National Park.

Topography is mainly rolling hills (Moutere Hills and Golden Downs) in the middle with the steep mountain ranges of the Richmond Range to the east and the Arthur Range to the west that extend up into alpine snow grass.

The area is dissected by the Motueka and Wai-iti rivers which both originate in the zone.

The two mountain ranges to the east and west of the Waimea zone greatly influence the climate of this zone. Acting as a barrier to weather systems moving up from the south and the west, the orientation of these two ranges will force weather fronts to drop rainfall in the ranges and force warm dry air downslope onto the Waimea Plains in a similar way to Canterbury's Föhn wind. This affects the Waimea zone in producing fire weather days in the high to extreme range.

Demographics

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

The townships of Tapawera and part of Wakefield, south of Edward Street are in the zone. Public roading infrastructure is predominantly in valley bottoms with ribbon rural and lifestyle properties mainly in valley bottoms or on the foothills throughout the zone.

Climate/weather

The Dovedale Remote Automated Weather Station is located centrally within the Waimea Basin Zone. It is 138m above sea level. Temperatures range throughout the year from 5.4°C in winter to 16.1°C in the summer months, with an overall average annual temperature of 10.9°C. There is moderate rainfall throughout the year in Dovedale with October being the wettest an average of 136mm, with the month of February being the driest with 79mm averages. Annually, Dovedale receives 1,371mm of rain.

Predominant weather is described as sunny, with sheltered areas that can receive very high intensity rain at times from the north east and north. Very warm summers and mild winters. Annual rainfall varies from 1,000mm in the north and up to 2,000mm to the southern, eastern, and western extremities. Given the mountainous topography surrounding the zone, future climate change indicators are that seasons may become more polarised and pronounced, with extremes of either very hot and dry summers or very wet ones being more commonplace. Dry spells of no rain for 15 days occur on average every 4 months in Nelson with the average length of dry spell being 20 days and the maximum 40 days

Land cover/ land use

The predominant land use for the zone is production forest. These are mainly Pinus radiata with some Douglas-fir, and scatterings of other minor species such as Eucalypt.

The production forest is all second rotation or greater therefore fuel loadings vary from fresh cutover to mid rotation stands high in gorse / bracken content through to age approximately 16-18 years where canopy closure suppresses the gorse/ bracken and hardwood shrubs establish. Valley bottoms and some foothills are established pastoral farms, with lifestyle blocks proliferating throughout.

Scale sheep and beef farming exists in the 88 Valley, Rosedale, and Motueka Valley areas. Hop gardens are fast becoming predominant in the Valleys around Tapawera.

The extreme east and western edges of the zone are bordered by the Mt Richmond Forest Park and Kahurangi National Parks respectively, which are predominately beech forests with pockets of Podocarp.

Within the zone is the Nelson boulder bank, a significant and unique geological and ecological area and to the north the beaches of Cable and Delaware bays that are popular for picnicking and fishing.

The approximate area of the Waimea zone is 347,908ha, of this:

- Urban - 736ha
- Coastal - 121ha
- Alpine - 5,876ha
- Agriculture - 54,377ha
- Tussock Grasslands - 14,012ha
- Scrublands - 34,916ha
- Exotic Forest - 100,172ha
- Beech, Podocarp, other Native Species - 133,161 ha
- Other unclassified areas - 4,537ha

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 • use of machinery – sparks • relevant operations affected Use of firebreaks	☒	☒	☒
Primary production, including hop growing in Motueka and Wai-iti Valley and sheep and beef farming • 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
Carters Eves Valley Sawmill • Impacted by restrictions on activities for suppliers	☐	☒	☒
Goldpine Ltd post and pole manufacturing plant – Golden Downs • Impacted by restrictions on activities for suppliers	☐	☒	☒
Nelson Pine Industries MDF and LVL plant, 7 sawmills and the port of Nelson are not situated in the zone but dependent on supply of log product from this zone	☐	☒	☐

Forestry includes:

- One-Forty-One Plantations Ltd - Golden Downs, Rai Valley, Kainui, Moutere Forests
- Tasman Pine Forests Ltd - Moutere, Hira, Waimea Forests
- New Forests Ltd – Motueka Forest
- Gibbons Forestry – Riuwaka valley forest
- Tasman District Council - Wai-iti, Kingsland, Motupiko, Tunnicliff forests

Restrictions on forestry activities can have a significant flow-on effect.

Lifeline utilities/other infrastructure

Lifeline utility/ other infrastructure	Contributes to increased risk of fire in high risk conditions	Affected by use fire control measures	Needs to be protected by using fire control measures
Electricity transmission lines • Sparking during high winds • Use of auto-reclosers limited in high fire danger Recommended vegetation mitigation practices	☒	☒	☒
Roading network • Sparks from vehicle malfunction, discarded cigarettes • Spark causing activities during road maintenance and mowing • Access issues may require protection by applying controls to surrounding areas	☒	☒	☒

Electricity transmission

Network Tasman and Nelson Electricity Ltd have distribution networks throughout the zone

Transpower's 220kw main high voltage lines that feed into the Stoke substation travel the length of the zone from south through to Stoke.

R**oading**

State Highway 6 and 60 are the only road access in and out of the district and Golden Bay. Additional fire control measures may be needed in the area to prevent communities from being isolated

Recreational locations

Recreational locations that will be affected by Fire and Emergency exercising its fire control powers:

- The Abel Tasman National Park is the smallest National Park in the country at 23,000ha but the most visited with 250,000 visitors a year.
- The Kahurangi National Park and Mount Richmond Forest Park, also partly located in the zone, contain high use tracks such as:
  - the Te Araroa trail along Mt Richmond
  - Wangapeka track networks in Kahurangi National Park
- The Brook Waimarama Sanctuary
- Canaan Downs
- Gilbert Lodge Scout Camps – Wairoa Gorge
- Paratai Girl Guide Camps - Lee Valley
- Mountain Bike Parks and Tracks approx. 18 competition events are held across the MTB tracks in the zone

A full list of locations that may have access restricted, and the controlling agency/organisation:

Waimea Basin – recreational location	Agency
Maitai Water Reserve	Nelson City Council (NCC)
Maungatapu Track	NCC
Brook Conservation Reserve	NCC
Coppermine Trail	NCC
Brook Campground	NCC
Brook Waimarama Sanctuary (Has own fire management plan)	NCC
Marsden Valley Reserve	NCC
Marsden Valley Road	NCC
Roding Water Reserve	NCC
Grampians Reserve	NCC
Sir Stanley Whitehead Reserve	NCC
Eureka Park	NCC
Tantragee Reserve (NCC Codgers)	NCC
Titoki Reserve	NCC

Waimea Basin – recreational location	Agency
Pipers Reserve	NCC
Hanby Park	NCC
Days Track (between Rocks Rd and Princes Dr)	NCC
Botanical Hill Reserve (Centre of NZ)	NCC
Maitai River Esplanade	NCC
Maitai Valley Road – up from Footbridge at 546 Maitai Valley Rd	NCC
Maitai Valley Road - up from Camp	NCC
Maitai Valley Campground	NCC
Kaiteriteri MTB park	KMBT
ATNP Inland track	DOC
ATNP Gibbs track	DOC
ATNP Taupo Point	DOC
ATNP Northern circuit	DOC
ATNP Falls River	DOC
ATNP Great walk	DOC
ATNP Campgrounds	DOC
Hackett Track	DOC
Wangapeka Track	DOC
Cable Bay Track	DOC/Private
Silvan MTB	Rick Griffin
Kingsland Forest MTB	Tasman District Council (TDC)
Dellside tracks	TDC
Tunnicliff forest - MTB	TDC
Tunnicliff reserve (Wai-iti)	TDC
Lee Valley Reserves	TDC
Lee Valley Road from main swimming hole	TDC
Aniseed Valley Reserves	TDC
Aniseed Valley Road	TDC
Wairoa Gorge Reserves	TDC/DOC
Wairoa Gorge road	TDC
Rocky River road	TDC
Canaan Road	TDC
Baton Valley Road	TDC
CFL easement Hori Bay	OFO
CFL easement Mt Duppa	OFO
CFL easement Inwoods	OFO

Waimea Basin – recreational location	Agency
Great Taste Trail MTB Tunnicliffs – tunnel – Spooners Bush Rd	OFO/ TDC
Kainui MTB	OFO
Mcleans Reserve	OFO
Norriss Gully Reserve	OFO
Clark Valley Reserve	OFO
Hira Forest	TPF
CFL easement Wairoa Gorge	TPF
Back (Wild) Codgers MTB	TPF
Tantragee Saddle – Fringe Hill Road	NCC/TPF
Graham Valley Rec Area	NZTA
The Gorge Mountain Bike Park	NMTBC

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
Festivals ○ Illuminate ○ Omnishakti ○ Mix festival • Increase in people without knowledge of fire risk or rules • Pyrotechnics managed by other approvals	☒	☒	☒
Mountain biking, back country running • Access may be restricted during high fire danger	☐	☒	☐
Motorsport events • Car fires and sparks from malfunctioning vehicles • Increase in people without knowledge of fire risk or rules	☒	☒	☐

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
Hunting • Campfires • Access may be restricted during high fire danger	☒	☒	☐
Forest access may be restricted during high fire danger	☒	☒	☒

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
Public conservation land • Ecological values at risk	☒	☒	☒
Road and track networks in forests used for illegal entry and activities	☒	☒	☒

Known fire hazards

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

Frequency of elevated fire danger

On average, this zone experiences:

- 16 days of extreme fire danger per fire season (Oct-May)
- 44 days of very high fire danger per fire season (Oct- May)

In the past 5 years, this zone experienced two years of drought, unseen since 1972/73.

In the 2018/19 and 2019/20 years, prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

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

Year	Fire	Cause
2019	Pigeon Valley fire (2300ha)	Agriculture discing
2009	Atawhai fire (25ha)	Mower strike
2009	Glenhope fire (541ha)	Disposal of ashes
2004	Irvines fire (200ha)	Arson

Predominant fuel type

The predominant fuel type in this zone is forestry.

Thresholds

Restricted season year round

Build-up Index (BUI) is the most relevant fire weather index to monitor for where forestry is the predominant fuel type.

Build-Up Index (BUI)		
0-60	60-80	>80
Restricted	Restricted (suspend fire permits)	Prohibited

Given the contiguous area of commercial forest in this zone, the steep nature of the topography, the high proportion of scrub understorey in the forests and around the very high-risk areas of East of Nelson City and Richmond township a year-round restricted season is enacted.

The threshold for implementing a prohibited season is pushed out to 80 from the standard 60 with the practice of suspending permits at BUI >60. This allows for forecast weather patterns to establish for the summer as often in the Nelson Tasman District with a mean average dry spell of 20 the BUI level between 60-80 is often the range at which the dry spell will be broken.

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.

Other local thresholds have not been set.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit “Fire Danger Today” signs.

Once the BUI climbs above 40, a daily update of fire risk level or “Colour” for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the “Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations”. They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities /*

Hotworks was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

Powerline auto-reclosers

In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off.

A copy of the guideline in Appendix 3.

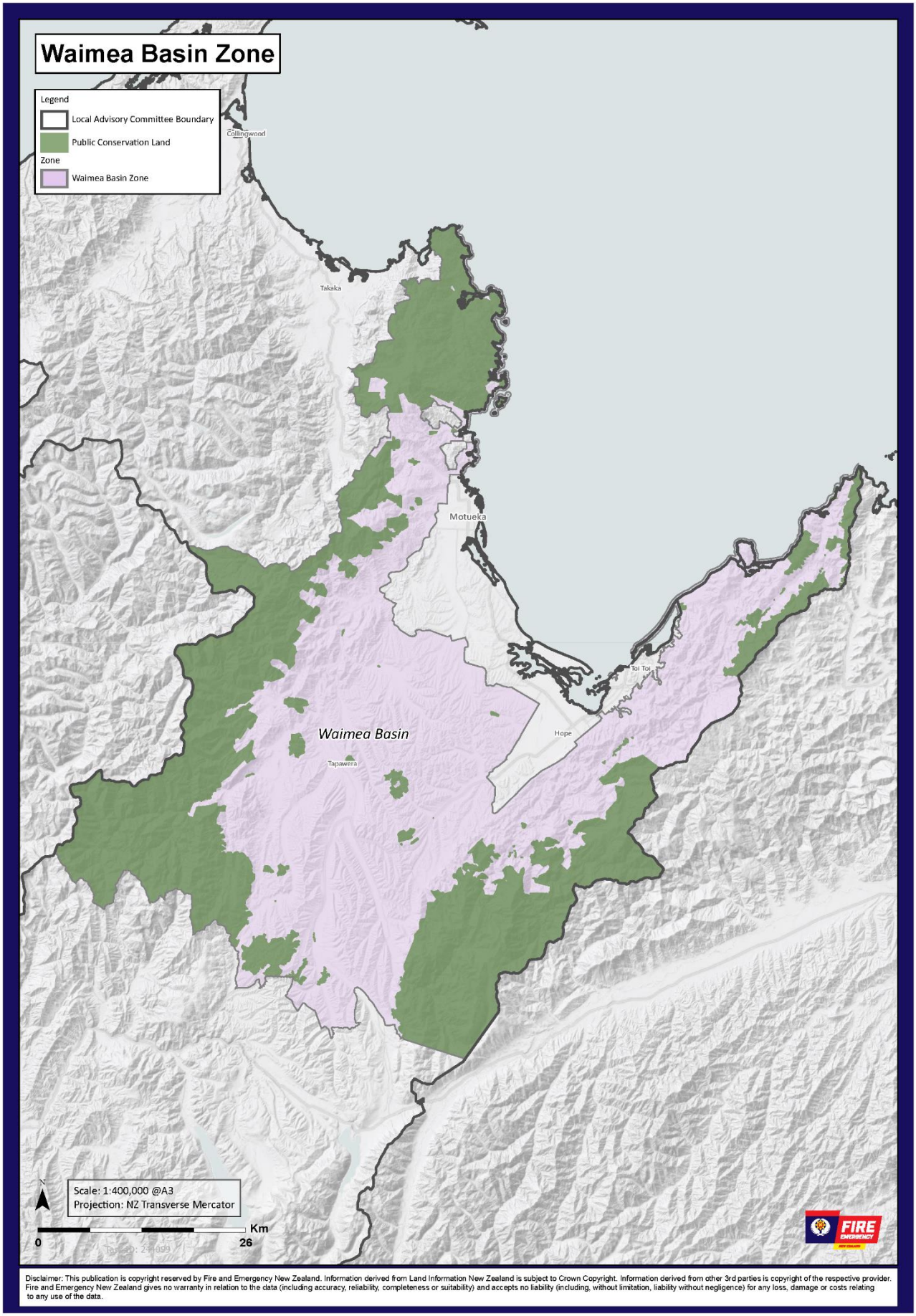
Representative remote automated weather stations

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

- Dovedale – In Moutere forest Corner Eder Road and Supplejack Valley - Alt 369m amsl
- Aniseed Valley - Above twin bridges reserve in the Aniseed valley - Alt 97m amsl
- Big Pokororo - On farmland above the start of the Big Pokororo Valley road - Alt 571m amsl
- Western Boundary - In Golden Downs forest on Western Boundary road- Alt 655m amsl
- Hira - In Hira forest on Isolation spur road - Alt 337m amsl

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

Waimea Basin zone map



Waimea Basin stakeholders

Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/prohibitions on activities
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Nelson City Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
One-Forty-One Plantations Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman Pine Forests Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
PF Olsen Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Department of Conservation national park land managers and conservancy in general	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Federated farmers	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	Consult during decision making
Agricultural Contractor's Association	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	Consult during decision making
Contractors Federation	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	Consult during decision making
NZ Apples and Pears	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	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
Nelson Mountain Bike Club	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	Consult during decision making
Federated Mountain Club	Public consultation	Public consultation	Notify via normal channels	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while creating plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Te Ātiawa o Te Waka-a-Māui	Consulted while creating plan	Consult while creating plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Toa Rangatira	Consulted while creating plan	Consult while creating plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Kōata	Consulted while creating plan	Consult while creating plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making

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.

Tokongawa / Marahau

Geography

The Tokongawa / Marahau zone consists of the peri-urban settlement of Tokongawa / Split Apple Rock, south to Ngaio Bay and bordered to the west by the Sandy Bay / Kaiteriteri road. The Otuwhero inlet and estuary, Kaiteriteri and Marahau production forests are also included in the zone. The zone consists of an estuary / tidal inlet and sand spit through to rolling and then very steep and incised separation point granite hill country.

Demographics

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

The settlement of Tokongawa / Split Apple Rock is a subdivision of upmarket properties sited for their views across Tasman Bay and down the Abel Tasman coastline. Ownership is a mix of permanent residents, offshore owners who reside for part of the year (summer predominantly) and local holiday homes. Many of the permanent residents are retirees, some with mobility issues.

Climate/weather

Marahau is 6m above sea level. Temperatures range throughout the year from 7.4°C in winter to 16.3°C in the summer months, with an overall average annual temperature of 11.9°C. There is moderate rainfall throughout the year in Marahau with June being the wettest an average of 158mm, with the month of February being the driest with 90mm averages. Annually, Marahau receives 1,581mm of rain.

Predominant weather is sunny, with sheltered areas that can receive very high intensity rain at times from the north east and north. Very warm summers and mild winters. Given the mountainous topography to the west of the zone, future climate change indicators are that seasons may become more polarised and pronounced, with extremes of either very hot and dry summers or very wet ones being more commonplace.

Land cover/ land use

By area, the predominant land use for the zone is the production forests of Marahau and Kaiteriteri. These are P. radiata forests in their 2nd and 3rd rotation. Fuel loadings vary from fresh cutover to mid rotation stands high in gorse / bracken content through to age approx. 16-18 where canopy closure suppresses the gorse/ bracken and hardwood shrubs establish. As a result of several devastating high intensity rainfall events in the last 10 years and the resulting public backlash, areas of Marahau Forest and Kaiteriteri Forest are being retired from P. radiata production and are being actively planted in Manuka for the apiary industry.

The peri-urban area of Tokongawa / Split Apple is predominantly covered in Manuka scrub. The southern end of the zone on the yet undeveloped peri-urban areas there are significant coverings of wilding pines in amongst the Manuka, leading to extremely high and volatile scrub fuel loadings. During the period 2013 to 2016 there was a resident funded program to remove wilding pines from in amongst the peri-urban developed area. The trees were felled to waste therefore have increased ground fuel loadings through until they rot.

Tasman District Council resource management plan rules state that the area is a significant natural landscape, therefore removal of native vegetation beyond the building footprint is a prohibited activity.

The area of the Tokongawa/Marahau zone is 1,741ha, of this:

- Coastal - 5ha
- Agriculture - 59ha
- Scrubland - 222ha
- Exotic Forest – 1,285ha
- Beech, Podocarp, and other Native Species - 77ha
- Other unclassified area (estuary) - 95ha

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
New Forests Ltd – Marahau and Kaiteriteri Forest cutting rights • use of machinery – sparks • relevant operations affected • Use of firebreaks	☒	☒	☒
Ngāti Tama and Ngāti Rarua – Owners of Marahau and Kaiteriteri Forest land and stands under 7 years old • use of machinery – sparks • relevant operations affected • Use of firebreaks	☒	☒	☒
Kaiteriteri Reserve Board – Owners of the eastern face of Kaiteriteri Forest that overlooks Kaiteriteri Bay and owners of Kateri mountain bike park	☐	☒	☒

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
Network Tasman - Electricity transmission lines • Sparking during high winds • Use of auto-reclosers limited in high fire danger • Recommended vegetation mitigation practices	☒	☒	☐

Recreational locations

- Split Apple Rock
- Toko Ngawa Point
- Kaiteriteri Mountain Bike Park and forest

There are no known events with professional pyrotechnic displays held in the zone.

- Tokongawa Drive may have access restricted if the Build-up Index (BUI) is greater than 100

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
Cultural cooking, e.g. Hāngī	☒	☒	☐
Fireworks • Use may be prohibited during high fire danger • Pyrotechnics managed by other approvals	☒	☒	☐
Beaches • Campfires • Increase in people without knowledge of fire risk or rules	☒	☒	☐
Mountain biking, horseriding, back country running • Access may be restricted during high fire danger	☐	☒	☐

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
The Tokongawa / Split Apple peri-urban area • Very high visitor numbers over summer on steep land and frequent coastal winds on what is a narrow road network surrounded by very high loadings of volatile vegetation	☐	☐	☒
Public conservation land • Ecological values at risk	☒	☒	☒

Known fire hazards

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

Frequency of elevated fire danger

On average, this zone experiences:

- 33days of extreme fire danger per fire season (Oct-May)
- 31 days of very high fire danger per fire season (Oct- May)

In the past 5 years this zone experienced 2 years of drought, unseen since 1972/73. In the 2018/19 and 2019/20 years prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

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

Year	Fire	Cause
2015	Otuwhero inlet fire – 0.5ha	Tree across powerlines
2009	Moss Road fire – 5ha	Machinery fire

Predominant fuel type

The predominant fuel type in this zone is scrub.

Thresholds

Permanent prohibited fire season

Scrub fuels are very reactive to relative humidity and wind, with extreme fire behaviour possible even during winter after several fine days. Due to the volatile nature of scrub fuels and the life and property at risk in the zone a consultation process with Tokongawa / Marahau property owners occurred in 2013.

As a result, the Tokongawa / Marahau zone was created and a permanent prohibited fire season put in place.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit “Fire Danger Today” signs.

Once the BUI climbs above 40, a daily update of fire risk level or “Colour” for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the “Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations”. They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities / Hotworks* was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

Powerline auto-reclosers

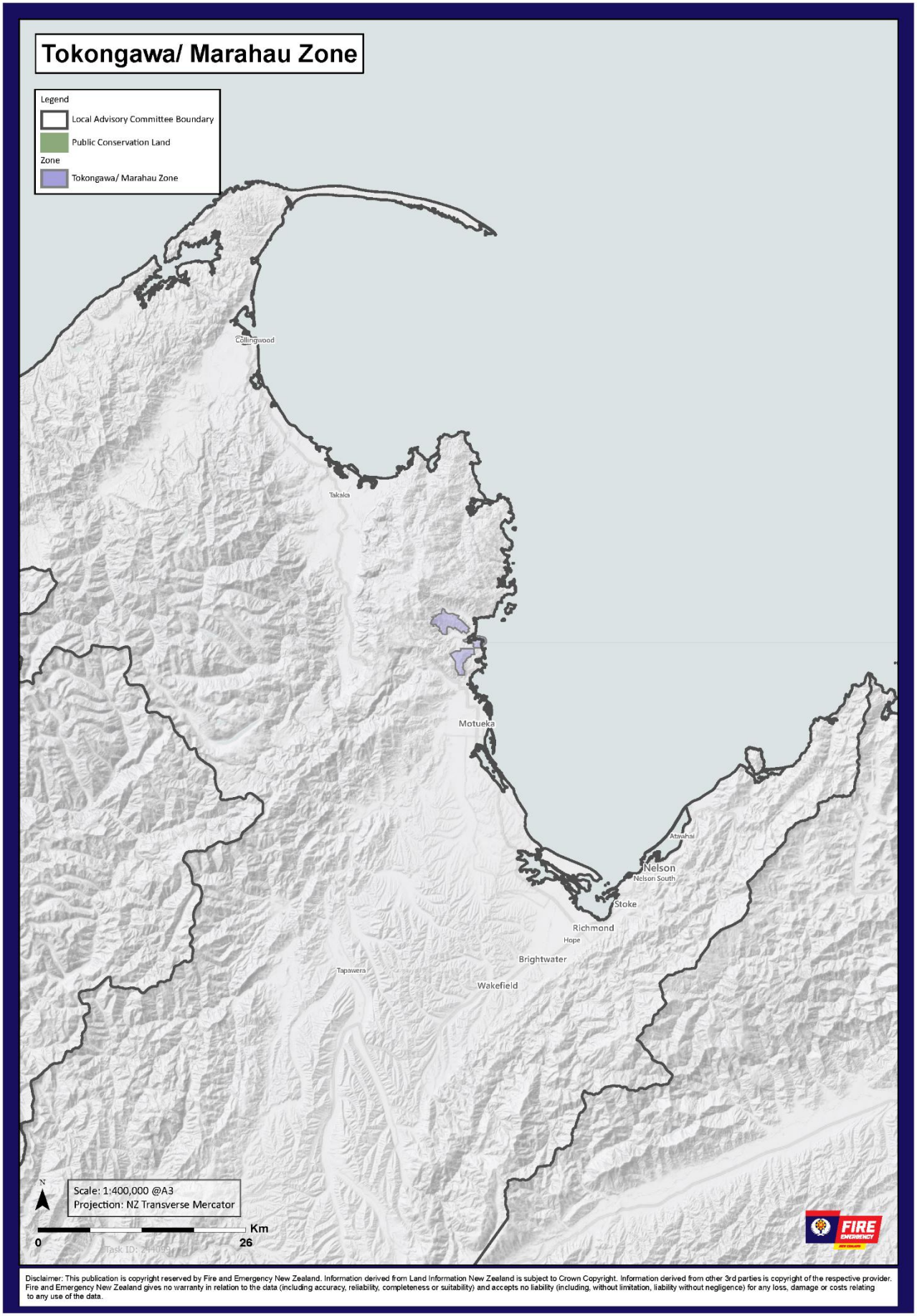
In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off.

A copy of the guideline in Appendix 3.

Representative remote automated weather stations

As this zone is in a permanent prohibited fire season, RAWS are not used to determine trigger thresholds in this zone.

Tokongawa / Marahau zone map



Tokongawa / Marahau zone 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	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Sandy Bay residents and owner's association (SAROA)	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
New Forests Ltd	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Tama	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Rarua	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Kaiteriteri Reserve Board	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making

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.

Coastal zone

Geography	The Coastal zone consists of the City of Nelson and the high-density housing areas of Richmond, Brightwater, Mapua, Motueka and part of the townships of Wakefield and Upper Moutere. The fire zones that make up the Coastal zone are Coastal rural, Coastal urban and Nelson urban. Topography is predominantly flat, with the hills of Tahunanui/ Nelson city and along the Upper Moutere and Tasman areas being the main elevated topography.
Demographics	Demographics help us understand how our communities use fire, and the type of support they might need and how we communicate with them. Nelson City and the townships of Richmond, Brightwater, Wakefield, Mapua and Motueka consist of medium to high density residential areas that fall under air discharge rules in the Nelson City and Tasman District Council Resource Management Plans. This effectively bans outdoor fires in the higher density areas and restricts burning to the months outside of June to August in the lower density/peri-urban areas.
Climate/weather	Nelson is 9m above sea level. Temperatures range throughout the year from 6.1°C in winter to 16.1°C in the summer months, with an overall average annual temperature of 11.2°C. There is moderate rainfall throughout the year in Nelson with October being the wettest an average of 135mm, with the month of January being the driest with 80mm averages. Annually, Nelson receives 1,396mm of rain. Motueka, located across Tasman Bay from Nelson and within the Coastal zone, received a slightly increased annual rainfall of 1,581mm, with annual temperatures the same as Nelson. Predominant weather is described as sunny. Nelson often holds the official title of New Zealand's sunniest town. Summer rainfall mainly comes from the north east and north. Summers are very warm and winters mild. Given the mountainous topography to the west of the zone, future climate change indicators are that seasons may become more polarised and pronounced, with extremes of either very hot and dry summers or very wet ones being more commonplace.
Land cover/ land use	Outside of the residential areas of the city and towns. The area consists of a large amount of lifestyle blocks that are pastoral, horticulture or a combination. Commercial land use operations are predominately pip fruit and vineyards with a smattering of hops and dairying intermingled. On the Waimea plains there are several significant market garden operations. Apart from pockets of scrub around the fringes of Nelson City, several remnant P. radiata stands in the Tasman area and the commercial forest and bio-solid operation on the 150ha Rabbit Island (Moturoa), the majority ground cover is grass, either for grazing or beneath the horticulture crops. This zone also consists of the popular recreational beaches from Motueka through to Tahunanui.

The total area of the Coastal zone is 38,846ha, of this:

- Urban (Nelson, Stoke, Richmond and Motueka) - 4,268ha
- Coastal – 151ha
- Agriculture (beef, sheep, dairy, horticulture) - 22,916ha
- Scrubland – 908ha
- Exotic Forests – 6,956ha
- Beech, and Indigenous – 430ha
- Other unclassified area – 3,217ha

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
Pip fruit industry • use of machinery – sparks • use of fire for land management • relevant operations affected	☒	☒	☒
Nelson Pine Industries MDF and LVL manufacturing site • Impacted by restrictions on activities for suppliers	☐	☒	☒
Tourism and recreation • People unfamiliar with local fire risk and rules • Access to locations may be restricted, so will impact business	☒	☒	☒

- Pip fruit industry where fire is used as a significant tool to control diseased trees and dispose of annual pruning's and trees removed for crop replacement.

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
Network Tasman - Electricity transmission lines • Sparking during high winds • Use of auto-reclosers limited in high fire danger • Recommended vegetation mitigation practices	☒	☒	☒

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
Roading network • Sparks from vehicle malfunction, discarded cigarettes • Spark causing activities during road maintenance and mowing • State Highway 6 and 60 only road access in and out of the District and Golden Bay.	☐	☐	☒
Nelson Airport • Requirement for notification and permission for burns in flight path, under CAA rules • Protected by own controls on use of fire and other activities in vicinity	☐	☐	☒
Port Nelson • Protect by applying controls to surrounding areas	☐	☐	☒

Recreational locations

- Great Taste Trail mountain bike track
- Rabbit Island (Moturoa) forest area
- Beaches in the zone
- There are many other recreational tracks, parks and locations that may be effected by access restriction during high 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
Monthly drummers circle gathering on Tahunanui beach to celebrate the full moon • Campfires • People without knowledge of fire risk or rules	☒	☒	☐
Annual Nelson Speedway celebration • Car fires or sparks from malfunctioning vehicles • People without knowledge of fire risk or rules	☒	☒	☐
The Great Taste cycle trail • Access to locations may be restricted, so will impact business	☐	☒	☒
Professional pyrotechnic events • Use may be prohibited during high fire danger • Pyrotechnics managed by other approvals	☒	☒	☐
Blessing of the Fleet – Nelson Harbour • Increase in people without knowledge of fire risk or rules	☒	☒	☐
Rabbit Island (Moturoa) Great Taste Trail MTB • Access may be restricted during high fire danger	☐	☒	☐

The Great Taste cycle trail travels the length of the zone from Nelson to Riuwaka. Any restrictions on access to the track impacts concession holders that provide guided and non-guided tours of the region

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
The peri-urban fringe of Nelson City and Richmond township	☒	☐	☒
Public Conservation Land	☒	☒	☒

The peri-urban fringe of Nelson City and Richmond township although not in this zone are directly adjacent to it. This urban / rural interface zone has been identified in previous planning exercises as a very high-risk area, both from a risk of fire ignition and a consequence basis.

Known fire hazards

- Large population of people that may access a range of local areas
- Very high visitor numbers over summer accessing local areas and undertaking tourist activities e.g. campfires
- Visitors to the beaches in the area lighting fires for warm and or cooking

Frequency of elevated fire danger

On average, this zone experiences:

- 48 days of extreme fire danger per fire season (Oct-May)
- 64 days of very high fire danger per fire season (Oct- May)

In the past 5 years this zone experienced 2 years of drought, unseen since 1972/73. In the 2018/19 and 2019/20 years prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

The known fire history for this zone includes:

Year	Fire	Cause
1998	Tasman fire – 500ha	Arson

Predominant fuel type

The fuel type in this zone is predominantly grasslands with some scrub.

Thresholds

Restricted season year round

The degree of grass curing (GC%) is the most relevant fire weather data to monitor where grassland is the predominant fuel type.

Grass Curing (GC%)		
0-70	70-80	>80
Restricted	Restricted (Suspend Permits)	Prohibited

The coastal zone is small relative to the size of the Waimea Basin zone which surrounds it. The Waimea basin zone is restricted season year-round until the prohibited triggers are reached. The experience of the difficulty of segregating and maintaining a mixed season over a small area has led to the Coastal zone being maintained in restricted season until the prohibited triggers are met.

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.

Other local thresholds have not been set.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire

events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit “Fire Danger Today” signs.

Once the BUI climbs above 40, a daily update of fire risk level or “Colour” for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the “Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations”. They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities / Hotworks* was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

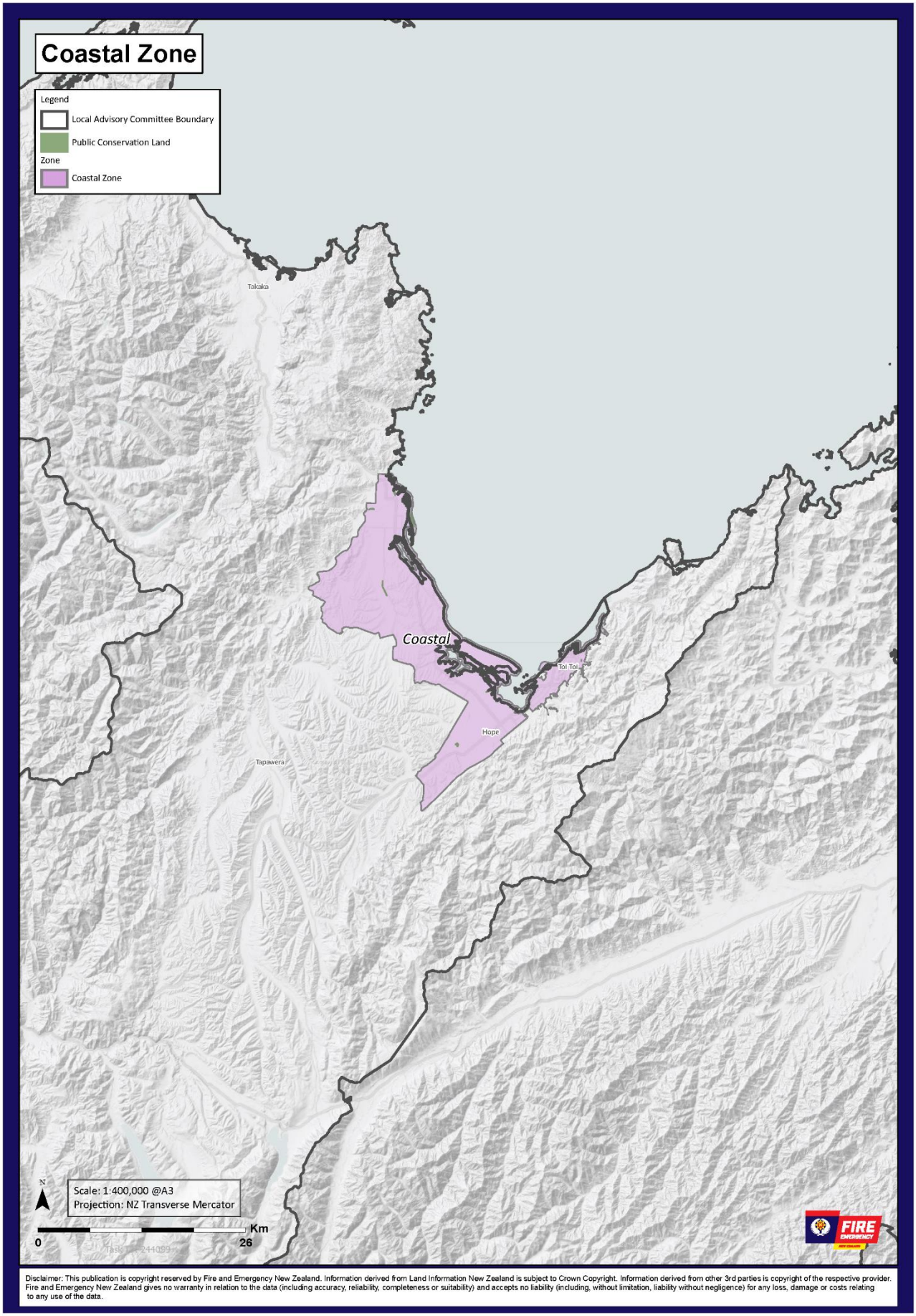
The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

	Powerline auto-reclosers In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off. A copy of the guideline in Appendix 3.
Representative remote automated weather stations	The Remote Automated Weather Station (RAWS) used to determine whether we have reached the trigger thresholds is Nelson Aero, sited at the southwestern corner of the Nelson Airport at Alt 3m amsl.

Coastal zone map



Coastal zone 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	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Nelson Pine Industries	Consulted while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Consult during decision making
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Nelson City Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
PF Olsen Ltd	Consulted while creating plan	Consult while amending plan	Notify of decision	Notify of decision	Consult during decision making
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Nelson Mountain Bike Club	Public consultation	Public consultation	Notify of decision	Notify of decision	Consult during decision making
Federated Mountain Club	Public consultation	Public consultation	Notify of decision	Notify of decision	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Te Ātiawa o Te Waka-a-Māui	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Toa Rangatira	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Kōata	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making

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.

Golden Bay (Mohua) zone

Geography

The Golden Bay (Mohua) zone consists of the urban Townships of Takaka, Collingwood and the medium density housing locations of Pohara, Ligar and Tata bays on the eastern side of the bay/zone and Pakawau on the west edge of the bay/zone.

The Takaka and Aorere valleys form the predominant valley systems of the zone with wide flat valley floors. These areas along with the terraces around the coastline of the bay form much of the flat topography in the zone. The remainder of the zone consists of steep to very steep coastal and foothills leading up to the mountains of Kahurangi National Park.

The fire permit areas of Golden Bay east, Golden Bay West, Takaka, Collingwood, Pohara beach, Ligar Bay beach, Tata Bay beach, Patons Rock beach, Tukurua Beach, Parapara beach, Collingwood beach and Pakawau beach make up the Golden Bay Zone.

Demographics

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

Takaka and Collingwood townships have the largest population of permanent residents. In total around 5000 people live permanently in the bay. The coastal bays and their settlements are very popular with summer holidaymakers with most dwellings in this area being holiday homes.

The campgrounds of Pakawau, Collingwood, Tukurua and Pohara are very popular in the summer with people from out of district. Over summer the population of Golden Bay can more than triple to over 15000 people

Climate/weather

Takaka is 12m above sea level. Temperatures range throughout the year from 5.7°C in winter to 15.5°C in the summer months, with an overall average annual temperature of 10.7°C. There is significant rainfall throughout the year in Takaka with June being the wettest an average of 188mm, with the month of February being the driest with 106mm averages. Annually, Takaka receives 1,885mm of rain.

Predominant weather is described as warm. Annual rainfall varies considerably across the zone. With averages for Bainham, inland from Collingwood in the Aorere valley averages approx. 4,000mm. Dry spells of no rain for 15 days occur on average every 6 months in Golden Bay with the average length of dry spell being 19 days and the maximum 35 days

Land cover/ land use

By far the largest area of land cover in the zone is the indigenous forest of Kahurangi National Park in the western and southern area. The steep foothills of Takaka and Aorere valleys and along the coastal strip between Takaka and Collingwood are covered in regenerating scrublands with gorse and Manuka / Kanuka being prevalent.

The Takaka and Aorere valleys and the terraces along the coastline are used predominantly for pastoral farming, with a mix of irrigated and unirrigated dairying being the majority use. Commercial forestry is on a small scale, with scattered stands often associated with farms and small holdings.

There has been some increase in the last two years of farmers wanting to use fire on their rougher country for the establishment of trees for carbon offsets.

The approximate area of the Golden Bay zone is 234,287ha, of this:

- Urban (Takaka and Collingwood) - 250ha
- Coastal (inlets, lagoons) - 814ha
- Alpine – 2,257ha
- Agriculture (beef, sheep, and dairy) - 32,912ha
- Tussock Grassland - 13,236ha
- Exotic Forest (commercial plantations and woodlots) - 3,617ha
- Beech, Podocarp, other Native Species - 146,876
- Scrubland – 28,855ha
- Other unclassified area - 5,470ha

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 • use of machinery – sparks • use of fire for land management • relevant operations affected	☒	☒	☒
Small farm forestry • use of machinery – sparks • relevant operations affected • Use of firebreaks	☒	☒	☒
Tourism and recreation • People unfamiliar with local fire risk and rules • Access to locations may be restricted affecting business	☒	☒	☒

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
Network Tasman - Electricity transmission lines • Sparking during high winds • Use of auto-reclosers limited in high fire danger • Recommended vegetation mitigation practices	☒	☒	☐
Hydro schemes in Cobb Valley an Pupu Valley • Protect by applying controls to surrounding areas	☐	☐	☒

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
Roading network • Sparks from vehicle malfunction, discarded cigarettes • Spark causing activities during road maintenance and mowing • State Highway 60 only road access in and out of Golden Bay. Additional controls may be needed.	☐	☐	☒

SH60 has proved problematic several times over the years with significant damage occurring during rainstorms. In February 2018 damage caused by a cyclone is still being repaired and access restricted to the road in 2021. The only other access to Golden Bay if SH60 is closed is by air or sea.

Recreational locations

- Great Walk Heaphy Track
- Cobb Valley – tramping/walking
- Abel Tasman National Park is directing adjacent to the North Eastern edge of the Zone

Locations that are considered for restricted access if the Build-up Index exceeds 100 are:

- Milnethorpe Quay road
- Milnethorpe park
- Paynes ford
- Grove track
- ATNP Rameka track
- ATNP Northern Great Walk
- Gibbs Hill Track
- Blue Hole
- Aorere Gold fields – tramping/walking (DOC)
- Puponga Farm Park Headland access and tracks (DOC)

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
Mountain biking - The Rameka Enduro is an annual event • Access may be restricted during high fire danger	☐	☒	☐
Blue Hole Festival • Increase in people without knowledge of fire risk or rules	☒	☒	☒
Cultural cooking, e.g. Hāngī	☒	☒	☐
Fireworks • Use may be prohibited during high fire danger • Pyrotechnics managed by other approvals	☒	☒	☐
Beaches • Campfires • People without knowledge of fire risk or rules	☒	☒	☐

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
High risk beaches	☐	☐	☒
Public conservation land	☒	☒	☒

Through local consultation with DOC and iwi the High- Risk Beaches have been identified as having significant ecological and cultural values that can be threatened and put at risk from fire. In identifying the High-Risk Beaches, access capability for firefighting should a recreational fire escape was considered in the mix.

Known fire hazards

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

Frequency of elevated fire danger

On average, this zone experiences:

- 22 days of extreme fire danger per fire season (Oct-May)
- 15 days of very high fire danger per fire season (Oct- May)

In the past 5 years this zone experienced 2 years of drought, unseen since 1972/73. In the 2018/19 and 2019/20 years prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

The known fire history for this zone includes:

Year	Fire	Cause
2009	Motupipi sandspit fire – 8.0ha	Flare

Predominant fuel type

The fuel type in this zone is predominantly indigenous forest with scrub covered foothills and valley floor grasslands.

Thresholds

Restricted season year round

The degree of grass curing (GC%) is the most relevant fire weather data to monitor where grassland is the predominant fuel type.

Build-up Index and the degree of grass curing (GC%) are the most relevant fire weather indices to monitor where there is a mixture of Indigenous, scrub and grasslands as the predominant fuel types.

Grass Curing (GC%)	Build Up Index (BUI)		
(%)	0-60	60-80	>80
0-70	Restricted	Restricted (Suspend Permits)	Prohibited
70-80	Restricted (Suspend permits)	Restricted (Suspend Permits)	Prohibited
>80	Prohibited	Prohibited	Prohibited

The scrub fuels in the foothills of the Takaka and Aorere valleys are very reactive to relative humidity and wind, with extreme fire behaviour possible during winter after several fine days. As a result, since 1992 the zone has been is a 365 day per year restricted zone until such time as the triggers for a prohibited season are reached.

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.

Other local thresholds have not been set.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit “Fire Danger Today” signs.

Once the BUI climbs above 40, a daily update of fire risk level or “Colour” for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the "Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations". They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities / Hotworks* was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

Powerline auto-reclosers

In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off.

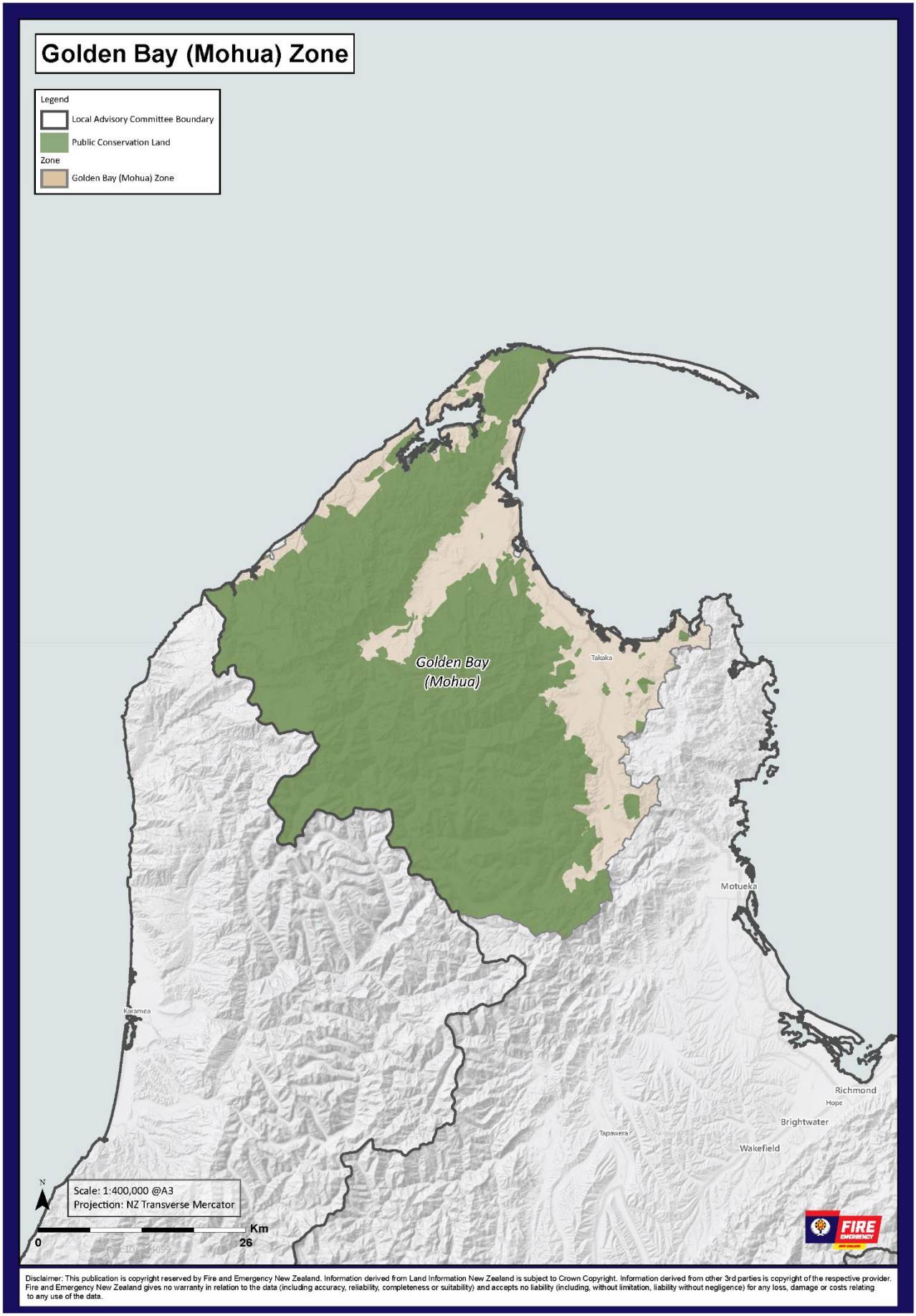
A copy of the guideline in Appendix 3.

Representative remote automated weather stations

The Remote Automated Weather Station (RAWS) used to determine whether we have reached the trigger thresholds is Takaka, sited at the North eastern edge of the Takaka aerodrome at 5m amsl

We will consider the forecast for this location when declaring or revoking a fire season.

Golden Bay (Mohua) zone map



Golden Bay (Mohura) 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	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Te Ātiawa o Te Waka-a-Māui	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Rārua	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Kōata	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making

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.

Golden Bay (Mohua) High Risk Beaches zone

Geography

The Golden Bay High Risk Beach Zone are the identified beaches in Golden Bay (Mohua) that have been identified through consultation as having significant ecological and or cultural values. The High-Risk beaches in Golden Bay are all the beaches in Golden Bay excluding Pohara beach, Ligar Bay beach, Tata Bay beach, Patons Rock beach, Tukurua Beach, Parapara Beach, Collingwood Beach and Pakawau Beach. The zone also includes the Milnethorpe park area due to its scrub high fuel loadings and recreational use.

Demographics

At Fire and Emergency New Zealand, we have an in-depth knowledge of the demographics for each of the communities we serve. These demographics help us to understand the type of support each of our communities might need and how we communicate with them.

We use this knowledge in all aspects of our work, including our delivery of the 4Rs of emergency management and for fire control measures, such as declaring the beginning and end of fire seasons, prohibiting and restricting the use fire, and issuing fire permits.

The beach zones are unpopulated but are used extensively throughout the year by holiday makers, tourists, and locals for fishing, picnicking and social gatherings. Beach use increases dramatically when the 5,000 population of Golden Bay increases to over 15,000 in the summer months.

Climate/weather

Predominant weather is described as warm. Average annual rainfall at Takaka is approx. 1900mm. Dry spells of no rain for 15 days occur on average every 6 months in Golden Bay with the average length of dry spell being 19 days and the maximum 35 days.

Land cover/ land use

The zone is predominantly sand beach and dunes with a covering of driftwood above the high tide mark. Vegetation covering on unconsolidated dune lands are exotic Marram grass with small pockets of native Tussock sand binders. On consolidated dunes there are some pockets of native lowland shrubs. These and the native tussocks are ecologically significant to the area. There have also been extensive restoration plantings done on some beach dunes within the zone.

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
Westhaven Shellfish Ltd – harvest cockles on the beaches around Pakawau/ Waikato point	☐	☐	☒

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
Nil	☐	☐	☐

Recreational locations

All of these beaches are recreational locations that will be affected by Fire and Emergency exercising its fire control powers.

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.

The beaches of Golden Bay have been and are historically significant to local iwi with coastal occupations dating back to links with the original migrants from Hawaiki. A number of pre–European Urupa and Wāhi tapu sites exist throughout the high-risk zone. The zone is also a valuable resource for mahinga kai.

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
Fireworks • Use may be prohibited during high fire danger • Pyrotechnics managed by other approvals	☒	☒	☐
Horse riding, walking • Access may be restricted during high fire danger	☐	☒	☐
Forest access may be restricted	☐	☒	☐
Beaches • Campfires • Increase in people without knowledge of fire risk or rules	☒	☒	☒
Hunting • Campfires • Access may be restricted during high fire danger	☒	☒	☐
Tourism • Increase in people without knowledge of fire risk or rules • Access may be restricted during high fire danger	☒	☒	☒

Special risk areas

Through local consultation with DOC and Iwi the High- Risk beaches have been identified as having significant ecological and cultural values that can be threatened and put at risk from fire. In identifying the High-Risk Beaches zone ,

access capability for firefighting should a recreational fire escape was considered in the mix.

Known fire hazards

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

Frequency of elevated fire danger

On average, this zone experiences:

- 20 days of extreme fire danger per fire season (Oct-May)
- 15 days of very high fire danger per fire season (Oct- May)

In the past 5 years this zone experienced 2 years of drought, unseen since 1972/73. In the 2018/19 and 2019/20 years prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

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

Year	Fire	Cause
2009	Motupipi Sandspit fire (8ha)	Flare

Predominant fuel type

The fuel type in this zone is coastal predominantly indigenous forest with scrub covered foothills and valley floor grasslands.

Thresholds

Permanent prohibited fire season

Scrub fuels are very reactive to relative humidity and wind, with extreme fire behaviour possible even during winter after several fine days. Due to the volatile nature of scrub fuels and the life and property at risk in the zone, a permanent prohibited fire season is in place.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit “Fire Danger Today” signs.

Once the BUI climbs above 40, a daily update of fire risk level or “Colour” for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the “Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations”. They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities /*

Hotworks was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

Powerline auto-reclosers

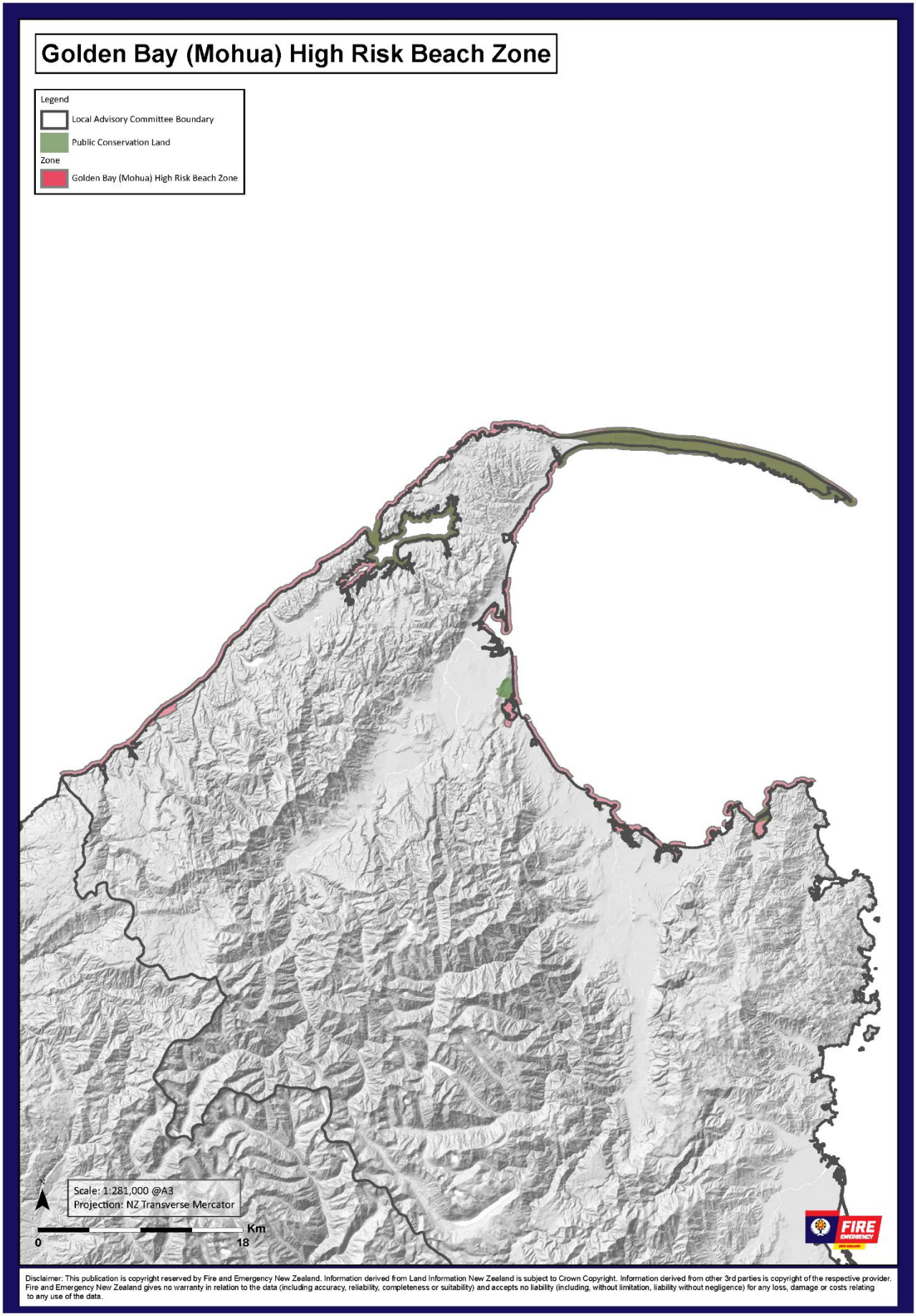
In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off.

A copy of the guideline in Appendix 3.

Representative remote automated weather stations

As this zone is in a permanent prohibited fire season, RAWS are not used to determine trigger thresholds in this zone.

Golden Bay (Mohua) High Risk Beaches zone map



Golden Bay (Mohua) High Risk Beaches 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 (if DOC zone)	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Te Ātiawa o Te Waka-a-Māui	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Rārua	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Ngāti Kōata	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making
Department of Conservation (if DOC zone)	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Consult during decision making	Consult during decision making

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.

Murchison/Lakes zone

Geography

The Murchison/Lakes zone encompasses the Nelson Lakes National Park and the lower section of the Kahurangi National Park to the west. As such, a significant alpine environment exists, with several mountains over 2,000m, two large lakes and remote wilderness areas predominate.

The area of the zone north of St Arnaud is predominately rolling hill country that leads into the Waimea zone (Golden Downs).

The main Alpine Fault runs through this zone and directly below the St Arnaud township with historically significant earthquakes having occurred in the Murchison area (1929).

The eastern boundary of the zone follows the St Arnaud Range and Spencer Mountains to a point NE of Springs Junction. The western boundary heads north along the Glenroy River to Burnbrea, from there, the boundary follows SH6 north until it reaches the Buller River. The western boundary then continues north following the Matiri Range until it reaches LAT –41.480371 LONG 172.394736. From here the boundary follows mountain ridgelines in a general ESE direction until it joins the Korere-Tophouse Road approximately 3.5km north of the Kikiwa substation.

Demographics

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

The township of Murchison has a permanent population of 471 and is primarily a rural hub town for the surrounding rural communities. Murchison is located on SH6 which is the main inland route between Canterbury and the Nelson/Tasman region. It is a mixed demographic of permanent residents, from retirees, rural industry workers and a thriving adventure sport area, which attracts a fluctuating seasonal population.

St Arnaud township is situated just outside the northern boundary of the Nelson Lakes National Park. The township has a permanent population of 110 with much of the population employed in the tourism sector and with the Department of Conservation. The township and area surrounding the township, contains a significant amount of holiday homes that remain uninhabited for much of the year. During the holiday periods, the population can increase four-fold.

Much of the rest of the Murchison/Lakes zone is scattered rural farming communities.

Climate/weather

Murchison is 171m above sea level. Temperatures range throughout the year from 4°C in winter to 15°C in the summer months, with an overall average annual temperature of 9.2°C. There is significant rainfall throughout the year in Murchison with October being the wettest an average of 228mm, with the month of February being the driest with 118mm averages. Annually, Murchison receives 2020mm of rain.

St Arnaud is 639m above sea level. Temperatures range throughout the year from 1.3°C average in July through to 12.8°C in January. Extremes can be experienced in St Arnaud, with snow blanketing the township with sub-zero temperatures at times during the winter, to elevated temperatures in the low thirties with accompanying low RH conditions during the summer months. Rainfall averages range from

106mm in July through to the wettest month of October bringing an average of 185mm. The overall average rainfall for St Arnaud is 1518mm.

Given the mountainous topography to the west of the zone, future climate change indicators are that seasons may become more polarised and pronounced, with extremes of either extremely hot and dry summers or very wet ones being more commonplace.

Land cover/ land use

The approximate area of the Murchison/Lakes zone is 387,395ha, of this:

- Urban (Murchison & St Arnaud) accounts for - 165ha
- Alpine (Nelson Lakes and Kahurangi partial) - 22,495ha
- Agriculture (dairy Murchison and cattle/sheep in the lakes district) - 32,814ha
- Beech, Podocarp, other native species - 271,100ha
- Tussock Grassland - 28,672ha
- Exotic Forestry (commercial plantations and woodlots) - 10,115ha
- Other unclassified area (lakes, rivers, riverbeds, wetlands) - 22,034ha

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
One-Forty-One - Forest Plantations in Station Creek and Tee-Total • use of machinery – sparks • relevant operations affected • Use of firebreaks	☒	☒	☒
Tasman District Council – Forest plantations in the Howard Valley • use of machinery – sparks • relevant operations affected • Use of firebreaks	☒	☒	☒
Primary production, including horticulture and agriculture • 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
Network Tasman - Electricity transmission lines • Sparking during high winds • Use of auto-reclosers limited in high fire danger • Recommended vegetation mitigation practices	☒	☒	☐
Roading network • Sparks from vehicle malfunction, discarded cigarettes • Spark causing activities during road maintenance and mowing • State Highway 6 and 63 only road access in and out of the District and St Arnaud	☒	☒	☒

Electricity transmission

110Kw overhead lines run through the Howard Valley and onto Murchison via the Buller river valley and from there out to Westport

The Islington to Kikiwa 220Kw line runs to the east of the zone via the Rainbow Valley and pass through the zone for a brief period to the east of the St Arnaud township

Recreational locations

- Tee-Total forest to the NW of St Arnaud township – mountain biking and forest access
- Lakes Rotoiti and Lake Rotoroa
- Mt Robert, and Rainbow Ski fields
- Lake Rotoiti Outdoor Education Centre
- Murchison Sport Recreation and Cultural Centre
- Murchison white-water kayaking and rafting

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
Alpine Lodge Loop the Lake endurance run – annual event held in early April	☐	☒	☒
Antique & Classic Boat Show- annual event run over two weekends in early March	☐	☒	☒
Nelson Lakes Gliding Club – annual flying week mid-February	☐	☒	☒
Buller Festival – Whitewater kayaking and rafting event held in early March each year	☐	☐	☒
Hikers in the Nelson Lakes and Kahurangi National Parks lighting fires for warm and or cooking	☒	☐	☐

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
St Arnaud urban area	☒	☒	☒
Public conservation land	☒	☒	☒
Lakes Rotoiti and Rotoroa • Very high visitor numbers over summer around staying at the Department of Conservation campsites, which are surrounded by very high loadings volatile vegetation such as mānuka and kānuka.	☒	☒	☒

The St Arnaud urban area is located on the boundary of Nelson Lakes National Park, restrictions on vegetation removal and modification mean that the township is situated in close proximity to highly volatile and large fuel loadings of native scrub (Manuka and Kanuka). To the north of the township, the exotic plantation forests also pose a significant risk to life, property and infrastructure should a wildfire develop and spread from this area.

DOC land runs throughout the zone which is restricted 365 days a year unless moved to prohibited

Known fire hazards

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

Frequency of elevated fire danger

On average, this zone experiences:

- 1 days of extreme fire danger per fire season (Oct-May)
- 18 days of very high fire danger per fire season (Oct- May)

In the past 5 years this zone experienced 2 years of drought, unseen since 1972/73. In the 2018/19 and 2019/20 years prohibited seasons were imposed and restrictions placed on access to high-risk tracks and locations.

Fire history

The known fire history for this zone includes:

Year	Fire	Cause
2018	Neilson Clearing – Shenandoah Saddle (28ha)	Suspected arson
2015	Speargrass Road - St Arnaud (1ha)	Out of control – controlled burn
2011	Matiri fire (20ha)	Out of control – controlled burn
2009	Neilson Clearing - Shenandoah Saddle (44ha)	Suspected arson

Predominant fuel type

The fuel type in this zone is predominantly indigenous forest with scrub covered foothills that contain medium areas of commercial forest and valley floor grasslands.

Thresholds

Restricted season year round

Build-up Index and the degree of grass curing (GC%) are the most relevant fire weather indices to monitor where there is a mixture of Indigenous, scrub and grasslands as the predominant fuel types.

Grass Curing (GC%)	Build Up Index (BUI)		
(%)	0-60	60-80	>80
0-70	Restricted	Restricted (Suspend Permits)	Prohibited
70-80	Restricted (Suspend permits)	Restricted (Suspend Permits)	Prohibited
>80	Prohibited	Prohibited	Prohibited

The scrub fuels in the zone are very reactive to relative humidity and wind, with extreme fire behaviour possible during winter after several fine days. As a result, since 1992 the zone has been is a 365 day per year restricted zone until such time as the triggers for a prohibited season are reached.

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.

Other local thresholds have not been set.

Prohibitions or restrictions on activities (section 52)

A Readiness Planning Group meets when it is clear that a BUI of 80 will be reached in part of the district. The group is made up of landowners /managers, recreational groups, mountain bike park operators, local authorities, forestry contractors, forest companies, engineering providers, roading companies and farmers.

The group meetings are scheduled for each Wednesday and the group reviews the current fire indices and the weather forecast for the next 10-15 days, and develops a plan for messaging, signage and restrictions needed for high-risk public areas and work sites.

All restrictions and closures are done with collaboration and agreement of the landowner / manager.

Access to commercial forests:

Build Up Index (BUI)		
0-60	60-80	>80
Access by permit only	Signage placed at entrances.	Public access prohibited Access only for work

Access to public and private walking tracks, mountain bike tracks / parks and recreation areas

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Public access prohibited Concession holders with plans may be granted access

Public road access restrictions to high-risk single egress valleys

Build Up Index (BUI)		
0-60	80-100	>100
No Restriction	Signage placed at entrances.	Consider restricting access to residents and workers only

Public areas considered for access restrictions when the Build-up Index (BUI) is greater than 100 are listed in the recreational locations for this zone.

Forestry operations

Since 2003 forest owners and contractors have been collaborating with the Fire Authority / Fire and Emergency, producing the *Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations*. It has been regularly reviewed to consider new equipment, evolving work practices and lessoned learned from fire events, so that it remains effective and relevant. The latest version is the result of 12 such reviews.

The guideline details the equipment requirements and activity requirements for each aspect of forest operations across six levels of fire risk. BUI and FWI are used

as the trigger levels. Each risk level is represented by a colour similar to the half grapefruit "Fire Danger Today" signs.

Once the BUI climbs above 40, a daily update of fire risk level or "Colour" for each forest zone is emailed out to a list of 351 industry people and organisations. The update is sent at approximately 9:00am each morning with the current day and following day forecast fire risk levels given. At 10am the levels are broadcast over the forest radio channels from the Richmond Hill fire lookout.

A copy of the guideline is included as Appendix 1.

Chainsaw thinning to waste/tree felling

Chainsaw thinning to waste / tree felling restrictions are documented within the "Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations". They are communicated across the Forest contractors and industry in line with the procedure outlined above for Forestry Operations.

Spark hazardous activities

In 2019 in consultation with a working group consisting of farmers, agricultural contractors, Engineering companies, Roadside mowers, and Local Authorities the *Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities / Hotworks* was developed. It is currently on its eighth iteration. The guideline uses a matrix of Grass Curing and Fine Fuel Moisture Code to determine the risk of ignition that is expressed in one of four colours, green, yellow, orange and red. For each risk level, the response equipment eequirements are listed for various activities including:

- Roadside and pasture / gorse / scrub mowing
- Welding / Grinding / Gas Cutting
- Crop Harvesting machine including crop trimming
- Mechanical pasture / scrub development / discing / ploughing / cultivating
- Tracked and digging machines on grass dead / vegetation (includes civil contracting and quarrying)
- Use electric fences
- Chainsaws, chippers, steel scrub cutters

The activity requirements for each activity type are given for each coloured fire risk level.

Each day before 9:00am the forecast risk levels for each zone in the district is emailed out to a list of 351 people and organisations. This list is different from the Forestry Operations email list.

A copy of the guideline is attached in Appendix 2.

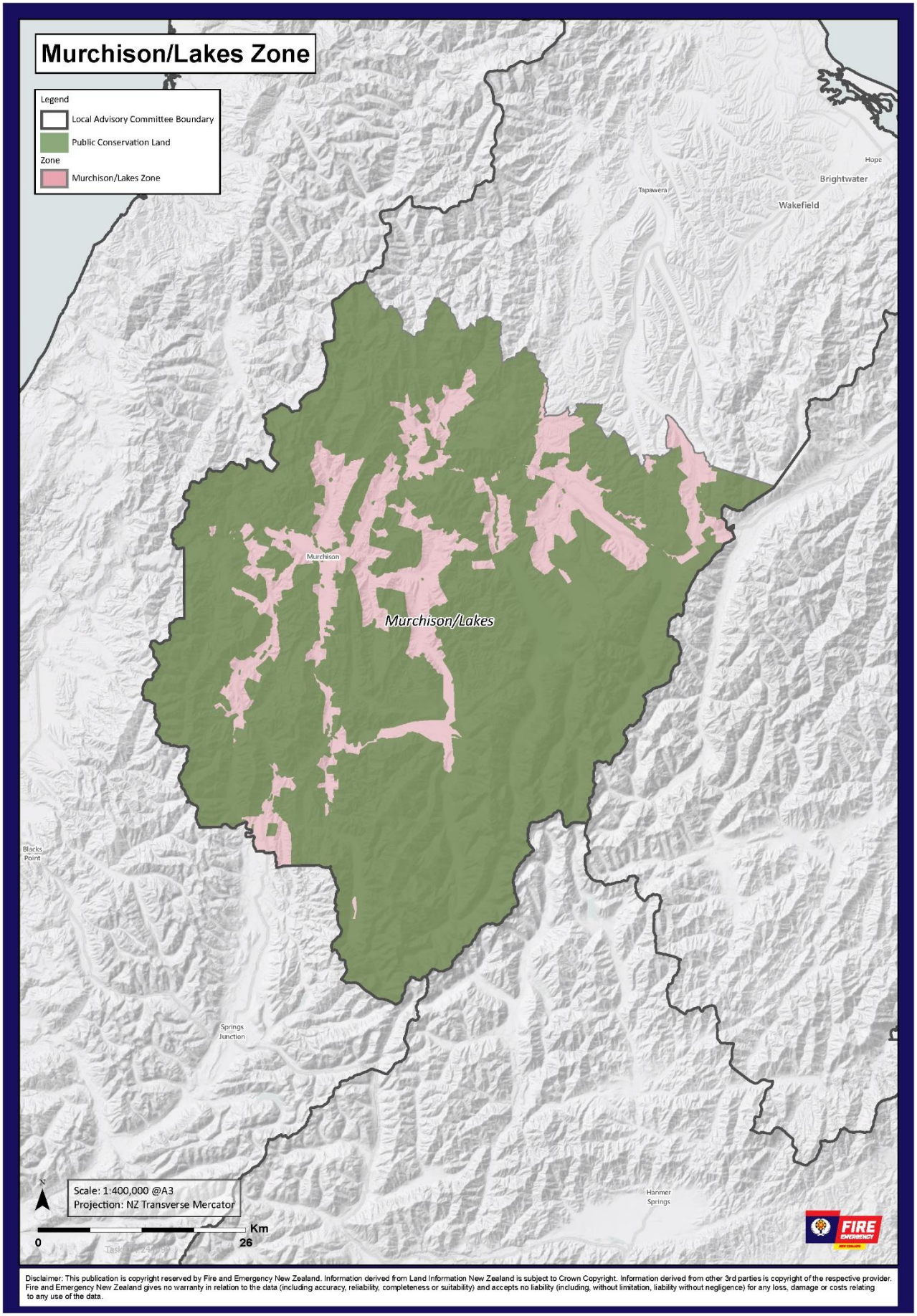
Powerline auto-reclosers

In 2015, the *Powerline Auto- recloser Guideline* was developed in consultation with local power network distributors. The guideline is based on the risk level being calculated on a matrix of grass curing and Fine Fuel Moisture Code with a wind component and results in a 3-colour risk level rating that indicates if the auto-reclose should be switched off.

A copy of the guideline in Appendix 3.

Representative remote automated weather stations	The Remote Automated Weather Station (RAWS) used to determine whether we have reached the trigger thresholds are Murchison, sited at the DOC office on Fairfax Street Murchison – Alt 145m amsl and St Arnaud on DOC land at the corner of View Road and Ward street St Arnaud at Alt 644m amsl. We will consider the forecast for these locations when declaring or revoking a fire season.

Murchison/Lakes zone map



Murchison/Lakes 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	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Public	Public consultation	Public consultation	Notify via public channels	Notify via public channels	Notify via public channels
One-Forty-One Plantations Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Tasman District Council	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
PF Olsen Ltd	Consulted while creating plan	Consult while amending plan	Consult during decision making	Consult during decision making	Consult during decision making
Federated farmers	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Agricultural contractor's association	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Contractors Federation	Public consultation	Public consultation	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Tama ki Te Tau Ihu	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Rārua	Consulted while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making

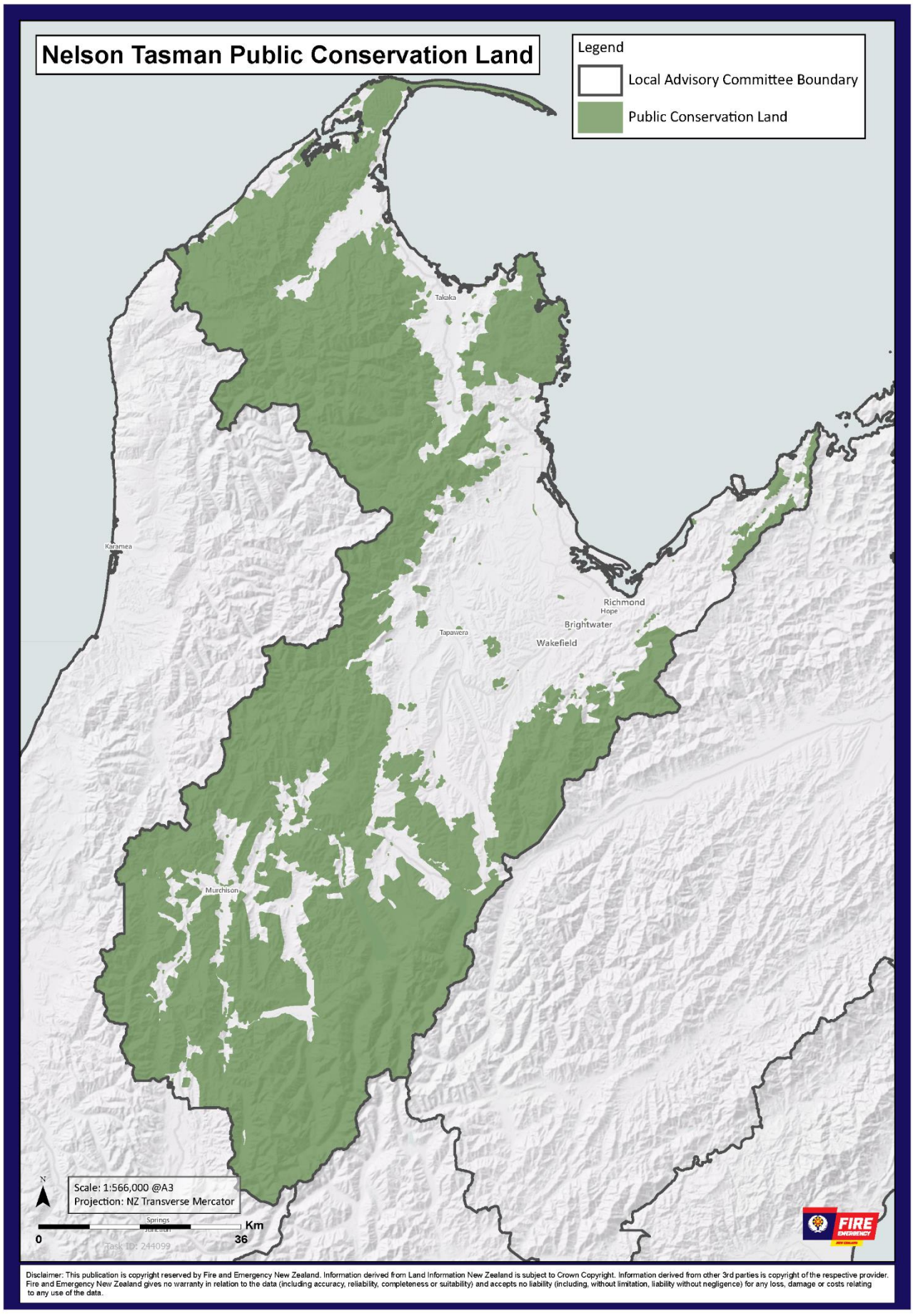
Stakeholder	Fire plan development	Fire plan amendment	Changing fire season to prohibited	Section 52 fire prohibitions	Section 52 restrictions/ prohibitions on activities
Ngāti Kōata	Consult while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Toa Rangatira	Consult while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making
Ngāti Apa ki te Rā Tō	Consult while creating plan	Consult while amending plan	Notify of decision	Weekly status updates during prohibited seasons	Consult during decision making

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.

Public conservation land

At present the entirety of the Nelson-Tasman area has a 365 restricted fire season in force. Historically the decision to enforce a 365 restricted fire season was done in consultation with key stakeholders within this area, such as Forestry. This mirrors the current position of having a 365 restricted fire season on all public conversation land and therefore any trigger thresholds are the same as the above listed for each zone.

Restricted season year round	Will maintain a restricted fire season status throughout the year unless elevated to a prohibited fire season.
Thresholds	Thresholds for declaring or revoking a prohibited fire season are the same as listed for the above zones.
Representative Remote Automated Weather Station	The Remote Automated Weather Station (RAWS) used to determine whether we have reached the trigger thresholds are: • Murchison • Takaka • Nelson Aero • Dovedale • Aniseed Valley • Big Pokororo • Western Boundary • Hira We will consider the forecast for these locations when declaring or revoking a fire season.


Nelson Tasman Public Conservation Land
Legend
Local Advisory Committee Boundary
Public Conservation Land
Takaka
Karamea
Richmond
Hope
Brightwater
Wakefield
Tapawera
Murchison
Scale: 1:566,000 @A3
Projection: NZ Transverse Mercator
Springs Junction
Km
0
36
Task ID: 244099
FIRE EMERGENCY
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Appendix 1 - Fire Prevention Guidelines for Forestry Operations

Nelson / Marlborough Forest Industry Working Group Fire Prevention Guidelines for Forestry Operations

Operative from 12th Feb 2020

Updated 10th Feb 2020

When a BUI of over 40 exists, the colour code for each of the forest climate areas will be broadcast over the radio at 10:00am each morning. The current day's level will be given as well as the forecast for the following day.

Nelson Tasman Area Channels broadcast on are:

NFL:1,3,12,13,14,15

TPF: Ops R2, Ops R4

You may also obtain the broadcast by email, contact –
Firepermit.Nelsontasman@fireandemergency.nz

or alternatively you can view the colour code levels with a 5-day forecast at:

https://fireweather.niwa.co.nz/region/Nelson%20Tasman

Escalating to one or more higher code levels may be appropriate for a period of time if significant wind and or low RH and or high temperatures exist..

Code Green BUI less than 40

Equipment Requirement					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		2*20 Litres or 9 litre pressurised water extinguisher on skid.	2*15 litre on site(full)	4 shovels	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people - 4 total made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Activity Requirement	
Requirements for….	
Welding / Gas Cutting / Abrasive Wheel Cutting	Only on bare earth 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. Patrol for 30 minutes after completion
Smoking	Only on bare mineral earth areas or in huts / vehicles

Code Blue BUI 40.1 to 60

Equipment Requirement					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		2*20 Litres or 9 litre pressurised water extinguisher on skid.	2*15 litre on site(full)	4 shovels	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people – 4 total made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Activity Requirements	
Requirements for….	**Requirements are….**
Welding / Gas Cutting / Abrasive Wheel Cutting	Only on bare earth 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. Patrol for 30 minutes after completion
Smoking	Only on bare mineral earth roads, landings, in huts or vehicles. No Smoking in cutover
Daily Inspections and maintenance	**Assess daily weather at 11:00am onsite to determine need for elevation of preparedness &/or work restrictions. ** See escalation methods at back of guide** **Check chainsaws and machinery for debris build up near hot working parts such as belly pans and radiators.** **Check engine bay hydraulic hoses for leaks.** **Inspect hauler blocks for heat, and ropes for binds, rock strikes.** **Vegetation around backline blocks cleared of vegetation to mineral earth 1.5m radius.** **Inspections should be noted in diary.**
Weekly inspections and maintenance	**Documented inspection of all fire equipment (including extinguishers)**
Chainsaw thinning	**Review site hazards (Undergrowth fuels, aspect, and escape routes). Move chainsaw thinning to areas with lower hazard where possible**
Fire starts	**Notify lookout or PRFO of any fire start regardless of size.**
Emergency planning	**Notify lookout of any road closures or weekend work** **Discuss code blue requirements and preparation for future elevation to code yellow at tailgate meetings** **Identify suitable water points (For ground and helicopter) around work areas**
Forest access	**Review public access to forest.**

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Code Yellow BUI 60.1 to 80

Equipment Requirements					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		2*20 Litres or 9 litre pressurised water extinguisher on skid.	2*15 litre on site (full)	4 shovels	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people – 4 total made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Activity Requirements	
Requirements for….	**Requirements are….**
Welding / Gas Cutting / Abrasive Wheel Cutting	**Only on bare earth** **Wet down area within 4m of work site before commencing** **Contact Lookout before starting 5485613 or Richmond Hill Lookout on RT** 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. Patrol for 30 minutes after completion.
Smoking	Only on bare mineral earth roads, landings, in huts or vehicles. No Smoking in cutover
Daily Inspections and maintenance	Assess daily weather at 11:00am onsite to determine need for elevation of preparedness &/or work restrictions. ** See escalation methods at back of guide Check chainsaws and machinery for debris build up near hot working parts such as belly pans and radiators. Check engine bay hydraulic hoses for leaks. Inspect hauler blocks for heat, and ropes for binds, rock strikes. Vegetation around backline blocks cleared of vegetation to mineral earth 1.5m radius. Inspections should be noted in diary.
Weekly Inspections and maintenance	Documented inspection of all fire equipment (including extinguishers) **Weekly cleaning for all machines and chainsaws.**
Chainsaw thinning	Review site hazards (Undergrowth fuels, aspect, and escape routes). Move chainsaw thinning to areas with lower hazard where possible
Fire starts	Notify lookout or PRFO of any fire start regardless of size.
Emergency planning	Notify lookout of any road closures or weekend work Identify suitable water points (For ground and helicopter) around work areas **Discuss code Yellow requirements and preparation for future elevation to code Orange at tailgate meetings** **Consider covering in tailgate meetings:** **escape plans (X2).**
Forest access	**Restrict public access to forest.**
Mowing and slashing (Roadside and ground)	**Stop roadside mowing and slashing**

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Code Orange BUI 80.1 to 100

Equipment Requirements					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		2*20 Litres or 9 litre pressurised water extinguisher on skid. 1 * 20 litre water at each back block.	1* full knapsack at each back block.	4 Shovels **Shovel or fire rake at each back block**	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people – 4 totals made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Activity Requirements	
Requirements for….	**Requirements are….**
Welding / Gas Cutting / Abrasive Wheel Cutting	Only on bare earth Wet down area within 4m of work site before commencing Contact Lookout before starting 5485613 or Richmond Hill Lookout on RT 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. Patrol for 30 minutes after completion.
Smoking	Only on bare mineral earth roads, landings, in huts or vehicles. No Smoking in cutover
Daily Inspections and Maintenance	Assess daily weather at 11:00am onsite to determine need for elevation of preparedness &/or work restrictions. ** See escalation methods at back of guide Check chainsaws and machinery for debris build up near hot working parts such as belly pans and radiators. Check engine bay hydraulic hoses for leaks. Inspect hauler blocks for heat, and ropes for binds, rock strikes. Vegetation around backline blocks cleared of vegetation to mineral earth 1.5m radius. Inspections should be noted in diary.
Weekly inspections and maintenance	Weekly documented inspection of all fire equipment (including extinguishers) Weekly cleaning for all machines and chainsaws.
Chainsaw thinning	Review site hazards (Undergrowth fuels, aspect, and escape routes). Move chainsaw thinning to areas with low hazard i.e D.fir, south facing slopes, low fuel loading, flat topography.
Fire starts	Notify lookout or PRFO of any fire start regardless of size.
Emergency planning	Notify lookout of any road closures or weekend work **Discuss code Orange requirements and preparation for future elevation to code Red at tailgate meetings** Consider covering in tailgate meetings: escape plans (X2). Identify suitable water points (For ground and helicopter) around work areas
Forest access	Restrict public access to forest. **Consider putting up signage at access points warning of fire danger.** **Restrict all hunting and firewood gathering.**
Mowing and slashing (Roadside and ground)	Stop roadside mowing and slashing
Machines – including: Cable assisted machines, Mobile machinery and 2 stage trucks. **Does not include cable haulers**	**Stop all machines except backline tractors working on cutover or tracks that do not have working inbuilt engine compartment suppression systems at 1300hrs.**

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Code Red BUI 100.1 to 120

Equipment Requirements					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		**1000 litre mobile pressurised water available with 60m hose on skid.** 1 * 20 litre water at each back block.	1* full knapsack at each back block.	4 shovels Shovel or fire rake at each backblock	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people – 4 total made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Activity Requirements	
Requirements for….	**Requirements are….**
Welding / Gas Cutting / Abrasive Wheel Cutting (hotworks)	**Only on bare earth and no hotworks between 1200hrs and 1900hrs** Wet down area within 4m of work site before commencing Contact Lookout before starting 5485613 or Richmond Hill Lookout on RT 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. **1000 litres available under pressure with at least 60m of hose within 2 minutes of worksite** Patrol for 30 minutes after completion.
Smoking	Only on bare mineral earth roads, landings, in huts or vehicles. No Smoking in cutover
Daily Inspections and maintenance	Assess daily weather at 11:00am onsite to determine need for elevation of preparedness &/or work restrictions. ** See escalation methods at back of guide Check chainsaws and machinery for debris build up near hot working parts such as belly pans and radiators. Check engine bay hydraulic hoses for leaks. Inspect hauler blocks for heat, and ropes for binds, rock strikes. Vegetation around backline blocks cleared of vegetation to mineral earth 1.5m radius. Inspections should be noted in diary.
Weekly Inspections and maintenance	Weekly documented inspection of all fire equipment (including extinguishers) Weekly cleaning for all machines and chainsaws.
Chainsaw thinning	Review site hazards (Undergrowth fuels, aspect, and escape routes). Move chainsaw thinning to areas with lower hazard where possible **No chainsaw thinning after 1200 hrs**
Fire starts	Notify lookout or PRFO of any fire start regardless of size.
Emergency planning	Notify lookout of any road closures or weekend work **Discuss code Red requirements and preparation for future elevation to code Purple at tailgate meetings** Consider covering in tailgate meetings: escape plans (X2). Identify suitable water points (For ground and helicopter) around work areas. **Patrol sites for at least 1 hour after machine shutdown.** **Consider having 3-person quick response crew with tanker within 10 minutes of each operation.**
Forest access	Restrict public access to forest. Consider putting up signage at access points warning of fire danger. Restrict all hunting and firewood gathering
Mowing and slashing (Roadside and ground)	Stop roadside mowing and slashing.
Harvesting Chainsaws	**Stop all chainsaw operations in cut over after 1200hrs**
Machines including: Cable assisted machines, Mobile machinery, 2 stage trucks and **cable haulers.**	**Stop all machines including moving ropes and carriages, working on cutover or tracks at 1300hrs.**

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Code Purple BUI 120.1 +

Equipment Requirements					
Requirements for….	**Extinguishers**	**Water**	**Knapsacks**	**Handtools**	**Communication**
Harvesting Crews		1000 litre mobile pressurised water available with 60m hose	2*15 litre (full & on skid) Full knapsack at each backblock.	4 shovels Shovel or fire rake at each backblock	Radio
Tree faller (Manual)	1* 350gm capacity Class A, B carried on belt each person using chainsaw				Radio
Tractor, Skidder, Excavator, Felling Machine	1*2kg dry powder Class A, B 1* 9 litre water pressure or 2kg foam				
Loader, Hauler, Bell and Waratah	1*2kg dry powder Class A, B				
Car, Utility or Van	1*0.9 kg Class A, B			1 shovel	
Truck or Grader	1*2kg dry powder Class A, B			1 shovel	Radio
Silviculture Crew	1* 350gm capacity Class A, B carried on belt for each person using chainsaw	1*20 Litres per knapsack (full) or 9 litre pressurised water extinguisher		Per 5 people – 4 total made up of shovels, slashers, combi, Puklowski, McLeod	Radio

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code

Activity Requirements	
Requirements for….	**Requirements are….**
Welding / Gas Cutting / Abrasive Wheel Cutting (hotworks)	**Consider Stopping all Hotworks** Only on bare earth and no hotworks between 1200hrs and 1900hrs Wet down area within 4m of work site before commencing Contact Lookout before starting 5485613 or Richmond Hill Lookout on RT 1 * 15 litre knapsack (full) or 9 litre pressurised water within 5m of work area. 1000 litres available under pressure with at least 60m of hose within 2 minutes of worksite Patrol for 30 minutes after completion.
Smoking	Only on bare mineral earth roads, landings, in huts or vehicles. No Smoking in cutover
Daily Inspections and maintenance	Assess daily weather at 11:00am onsite to determine need for elevation of preparedness &/or work restrictions. ** See escalation methods at back of guide Check chainsaws and machinery for debris build up near hot working parts such as belly pans and radiators. Check engine bay hydraulic hoses for leaks. Inspect hauler blocks for heat, and ropes for binds, rock strikes. Vegetation around backline blocks cleared of vegetation to mineral earth 1.5m radius. Inspections should be noted in diary. Daily inspection of hydraulic hoses, block bearings, machine belly pans and radiators.
Weekly Inspections and maintenance	Weekly documented inspection of all fire equipment (including extinguishers) Weekly cleaning for all machines and chainsaws.
Chainsaw thinning	**Stop all thinning**
Fire starts	Notify lookout or PRFO of any fire start regardless of size.
Emergency planning	Notify lookout of any road closures or weekend work **Discuss code Purple requirements tailgate meetings.** Consider covering in tailgate meetings: escape plans (X2). Identify suitable water points (For ground and helicopter) around work areas. **Establish 3-person quick response crew with tanker within 10 minutes of each operation.** Patrol sites for at least 1 hour after machine shutdown. **Consider short response standby helicopter within 10mins of operation.** **Extensions to working hours on bare earth or processing sites are subject to appropriate readiness and emergency response planning.**
Forest access	Restrict Public access to forest Consider putting up signage at access points warning of fire danger. Stop all hunting and firewood gathering.
Mowing and slashing (Roadside and ground)	Stop roadside mowing and slashing.
Harvesting chainsaws	**Stop after 1200hrs.**
Machines including: Cable assisted machines, Mobile machinery, 2 stage trucks and cable haulers.	**Stop all machines working on bare earth or processing sites between 1300 and 1900 HRS** Stop all machines including moving ropes and carriages, working on cutover or tracks at 1300hrs. **Consider stopping log truck movement between 1300-1900hrs. (An example method for doing this is in Appendix 2)** **Stop all slash raking and fire breaking**

Note: Items highlighted in BOLD are equipment or activity requirements that have been newly introduced from the previous colour code.

**Code Escalation Options

The following options are available in assessing current weather conditions or forecast conditions when making the decision to escalate to a higher code level: **NB it may be appropriate that you elevate more than one level while a significate fire weather event is occurring i.e strong wind and or low RH and or high temperatures.**

1. If the FWI is or forecast to be over 25. This can be found at: http://ruralfiredanger.co.nz/w.cgi?cmd=nrfa&region=Waimea%20Rural%20Fire%20District or by calling the lookout, or
2. An onsite measurement of Wind and RH indicates that the FWI is likely to be over 25, or
3. If there is wind that is averaging more than 20-25km/h. This can be measured either by a handheld wind meter or by using the Beaufort wind scale as below:
    - Force 2 = Light breeze, 6-11 km/h – wind felt on the face, leaves/needles rustle
    - Force 3 = Gentle breeze, 12-19 km/h – leaves/needles and small twigs in constant motion, wind extends light flags
    - Force 4 = Moderate breeze, 20-29 km/h – wind raises dust, small branches are moved
    - Force 5 = Fresh breeze, 30-39 km/h – small trees begin to sway, waves form on open water.

When assessing the decision to escalate if and how many levels, you can assess the following indicators in forming your decision:

- Steep slopes – greater than 20 degrees (35%, or grade of 1 in 3)
- High fuel loads – especially if dry fine fuels from thinning, cutover or scrub understory (e.g. gorse, fern, manuka) are present
- Hotter, drier aspects – North or West facing
- If fine fuels are dry – indicated by dead litter on the ground crunching as walked on, elevated dead needles snapping when bent, seed pods / cones bursting or dust rising from dirt tracks as you walk along them.

The more indicators present – the higher the risk

Example Template

Considering risks associated with log transport in extreme conditions (Code Purple)

There are several specific risks associated with log transport operations described below. Before Fire weather conditions reach Code PURPLE each logging site and location can be reviewed against the risks described as well as any other risks that might be relevant. The risks provided in this document along with recommended mitigations can be reviewed for each logging crew and a strategy for the next 3 weeks based on their location proposed and documented in the table below.

Risk assessment considerations:

People
The operation is near a rural community that would be threatened by a fire. The driver is at risk from a fire starting within the near neighbour environment
Equipment
The loading operation is by tracked excavator-based equipment that can be a source of sparks The loader is a source of a machine fire. Regular checks of cleanliness and/or inbuilt suppression equipment. Chains dragging on the road can ignite fine fuels along road edge A flat tyre collapses onto the steel rim generating sparks Failed wheel bearings and brake components can drop hot metal
Materials
There are fine fuels in close proximity to the loading operation There is a fuel loading imposing into the roadway
Environment
Wind conditions The crew is near to a county road with a low fuel environment. Short pasture There is a very long lead distance to the nearest county road The exit road is narrow and carries some form of fuel loading near to the carriageway There is no alternative access (escape) opportunity for the truck

Mitigations

1. Chains, tyres, wheels are all checked prior to leaving skid and at the load securing point
2. Any fine fuel on the loading area is brushed off to mineral soil prior to the logging crew leaving at the end of their shift 1300hrs.
3. The crew has a mobile pressurised water supply of at least 2000 litres and at least 60m of fire hose located within 10 minutes response time for the loading point and exit road.

Stop transport operations between 1300-1900 in code purple when: (If any of the following considerations are present)

1. Wind exceeds 10 Km/hr (FWI 30)
2. A dwelling or community is close to the operation or access road and evacuation would be complicated (fire would block one-way valley system; continuous high fuel loadings surround property/dwellings)
3. A tracked excavator-based loader is working
4. The access roadway is narrow and/or overgrown (carries some form of fuel loading)
5. There is any combustible material on the loading area
6. There is no reliable/suitable alternative escape route for the people on the load out site

Proposed load out restrictions 1300-1900 for the next three weeks at each crew are:

List of each crew / location with risk assessment and restrictions

Crew	Location	Risks	Restrictions
A	Block XXX	Located in gully below houses	No Load outs
B	Block YYY	People in houses further up one-way valley	No load outs
C	Block ZZZ	No near neighbours, new road with no encroaching fuel, wheeled loader, fresh skid clear of slash, reliable escape route available. Pressurised water available	Load outs allowed

Appendix 2 - Heat and Spark Hazardous Activities / Hotworks

Nelson Tasman Fire Prevention Guideline for Heat and Spark Hazardous Activities / Hotworks

Spark Hazardous industry activities with grass and scrub fuels fire risk potential:

1. Roadside and pasture/ gorse / scrub mowing and mulching
2. Welding, grinding, gas cutting
3. Crop harvesting including harvesters and transport vehicles
4. Land preparation including tractors and implements that strike or move through the ground
5. Tracked machine operation
6. Use electric fences
7. Use Scrub Bars, Chainsaws, Chippers

Grass Fuels:

- At low **grass curing** values, the proportion of dead grass fuel present is low and there is little fuel to be ignited. Potential for fire spread is also low and any fire will only spread slowly, if at all, and with lower fire intensity so that control is more easily achieved;
- At high **grass curing** values, the proportion of dead grass fuel present is higher meaning fire will develop and spread faster with higher intensity making control more difficult.
- At low **FFMC (Fine fuel moisture code)** values, grass fuels are moister so that the likelihood of ignition is low, and fire spread is impeded;
- At high **FFMC (Fine fuel moisture code)** values, grasses are drier and are easily ignited, develop fast and spread rapidly;

Scrub Fuels:

Scrub fuels particularly Manuka and Gorse have a high loading of fine fuels that dry out rapidly often within days after rain. Hot, dry and windy days will dry scrub out and make it available to burn rapidly. Fires are easily ignited, develop and spread quickly and burn with high intensity making control difficult.

Heat and Spark Hazardous Operations (Hotworks) Fire Prevention Guideline

As well as grass mowing when the grass or scrub is dry, cutting, grinding and activities where metal may strike metal or stone have a history of starting fires. These typically ignite grass and scrub fuels. Grass curing and FFMC (Fine Fuel Moisture Code) are the major factors in determining fire risk ignition potential from sparks. High wind speeds will escalate fire spread and growth once ignition has occurred.

How to use this guide

There are two ways to use this guide –

- Use the method described below for a site-specific assessment. You will need to have a basic understanding of fire science to understand how to do this.
- Use the code produced and emailed out each day by Fire and Emergency NZ.

Site Specific Assessment Procedure

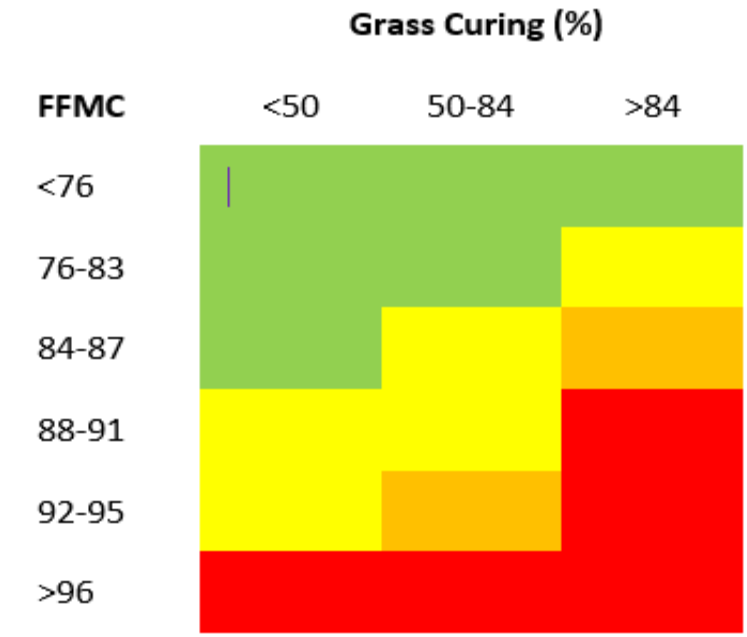
1. Use the grass curing guide on the next page to help determine grass curing level
2. Determine the FFMC by

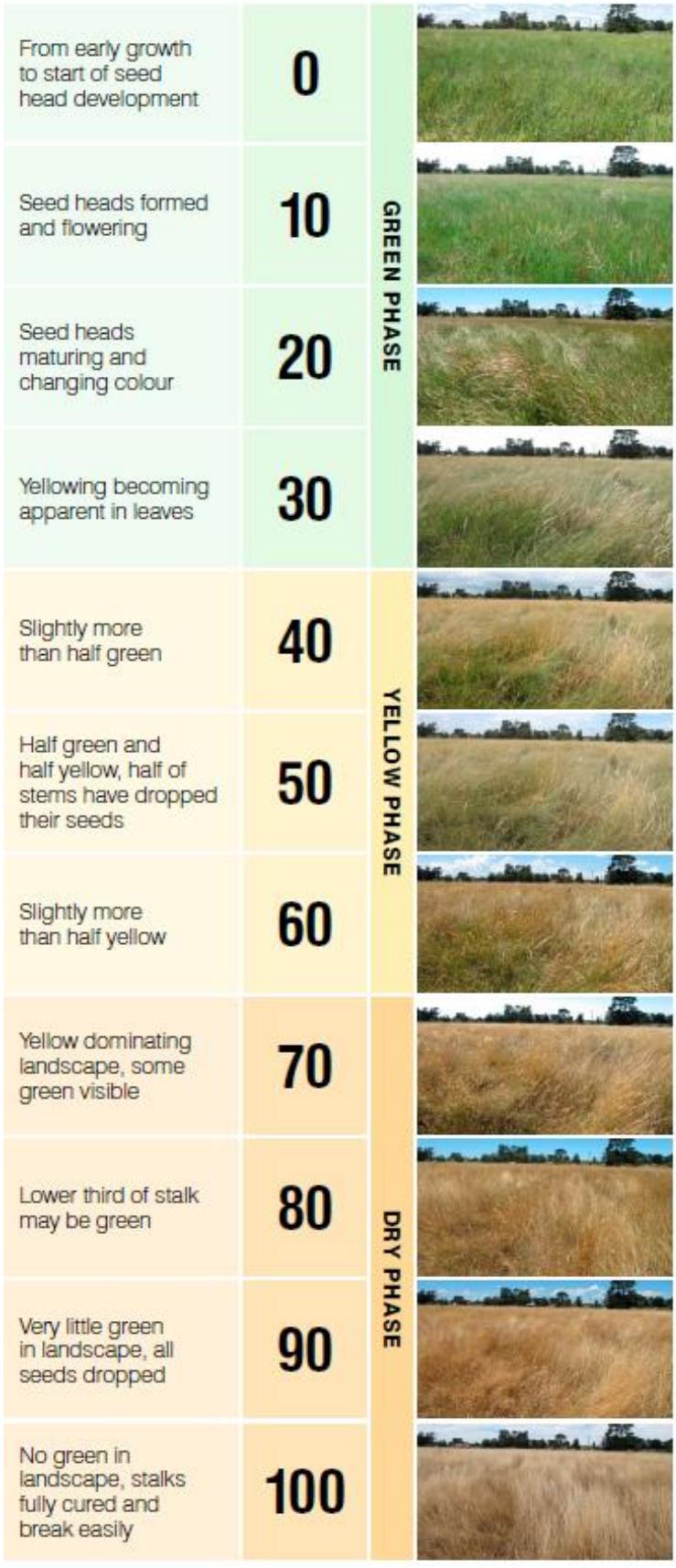
a. FFMC Level Guidelines can be viewed at https://fireweather.niwa.co.nz/region/Nelson%20Tasman scroll down to the table and the FFMC level for your nearest weather station can be read or

b. Or refer to the daily broadcast provided by Fire and Emergency New Zealand

Use this matrix below to identify the relevant risk by cross matching the onsite grass curing level with the FFMC for the day / time. Where these two indices cross gives the "Colour Code" risk level for the site. Look up the applicable "Colour Code" in the table below to determine equipment requirements and timing restrictions for your activity

Grass Curing Guide





When estimating the amount of cured or dead grass, ensure that you take into account the amount of thatch that may be under the top grasses

Code Green

NB: Any items in Bold indicate the requirement has been introduced at that Colour Code level

Equipment Requirements				
Requirements for….	**Extinguishers**	**Water**	**Handtools**	**Communication**
Road side and pasture/ gorse / scrub mowing and mulching.	**2kg dry powder**	**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	
Welding / Grinding / Gas cutting	**2kg dry powder**	**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	
Crop Harvesting machine / site, includes crop trimming	**2kg dry powder**	**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	
Mechanical pasture / scrub development /discing / ploughing / cultivating	**2kg dry powder**	**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	
Tracked and digging machines on grass / dead &/or dry vegetation (Includes civil contracting and quarrying)	**2kg dry powder**	**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	
Use electric fences				
Chainsaws, chippers, steel scrub cutters		**9 litre pressurised water extinguisher or full 15 litre knapsack**	**Shovel**	

Activity Requirements	
Requirements for….	
Welding / Gas Cutting / Abrasive Wheel Cutting	**Only on bare earth / non-flammable surface**

Code Yellow

NB: Any items in Bold indicate the requirement has been introduced at that Colour Code level

Equipment Requirements				
Requirements for….	**Extinguishers**	**Water**	**Handtools**	**Communication**
Road side and pasture/ gorse / scrub mowing and mulching.	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **100 litres available under pressure within 5 minutes**.	Shovel	**Radio to base or cell phone with coverage**
Welding / Grinding / Gas cutting	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. within **5m of worksite**	Shovel	**Radio to base or cell phone with coverage**
Crop Harvesting machine / site, includes crop trimming	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack.	Shovel	**Radio to base or cell phone with coverage**
Mechanical pasture / scrub development /discing / ploughing / cultivating	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack.	Shovel	**Radio to base or cell phone with coverage**
Tracked and digging machines on grass / dead &/or dry vegetation (Includes civil contracting and quarrying)	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack.	Shovel	**Radio to base or cell phone with coverage**
Use electric fences				
Chainsaws, chippers, steel scrub cutters	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack.	Shovel	**Radio to base or cell phone with coverage**

Activity Requirements	
Requirements for….	
Road side and pasture/ gorse / scrub mowing and mulching.	**Ensure mower head bearings are in good condition** **Ensure engine compartment is clean**
Welding / Grinding / Gas cutting	**Not permitted above vegetation. Only on bare earth / non-flammable surface** **Wet down area 4m around work site before commencing** **Patrol for 30 minutes after completion**
Crop Harvesting machine / site, includes crop trimming	**Check and if necessary clean machine daily**
Mechanical pasture / scrub development /discing / ploughing / cultivating	**Check and if necessary clean machine daily**
Tracked and digging machines on grass / dead &/or dry vegetation (Includes civil contracting and quarrying)	**Check and if necessary clean machine daily**
Use electric fences	**Check fences and mains feed lines for shorts - weekly**
Chainsaws, chippers, steel scrub cutters	**Check and if necessary clean machine daily. Avoid using scrub bars where contact with rock or steel may occur**

Code Orange

NB: Any items in Bold indicate the requirement has been introduced at that Colour Code level

Equipment Requirements				
Requirements for….	**Extinguishers**	**Water**	**Handtools**	**Communication**
Road side and pasture/ gorse / scrub mowing and mulching.	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **300 litres available under pressure with at least 60m hose within 2 minutes.**	Shovel	Radio to base or cell phone with coverage
Welding / Grinding / Gas cutting	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack within 5m of worksite	Shovel	Radio to base or cell phone with coverage
Crop Harvesting machine / site, includes crop trimming	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **300 litres available under pressure with at least 60m hose within 2 minutes.**	Shovel	Radio to base or cell phone with coverage
Mechanical pasture / scrub development /discing / ploughing / cultivating	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **300 litres available under pressure with at least 60m hose within 2 minutes.**	Shovel	Radio to base or cell phone with coverage
Tracked and digging machines on grass / dead &/or dry vegetation (Includes civil contracting and quarrying)	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **300 litres available under pressure with at least 60m hose within 2 minutes.**	Shovel	Radio to base or cell phone with coverage
Use electric fences		Consider using low power portable units and turning off farm mains units.		
Chainsaws, chippers, steel scrub cutters	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. **300 litres available under pressure with at least 60m hose within 2 minutes.**	Shovel	Radio to base or cell phone with coverage

Activity Requirements	
Requirements for….	
Road side and pasture/ gorse / scrub mowing and mulching.	Ensure mower head bearings are in good condition Ensure engine compartment is clean **Have an observer behind operation or where all work area can be seen.** **Restricted hours of work to when FFMC less than 83 (generally no work 12:00pm – 7:00pm)**
Welding / Grinding / Gas cutting	Not permitted above vegetation. Only on bare earth / non-flammable surface Wet down area 4m around work site before commencing Patrol for 30 minutes after completion
Crop Harvesting machine / site, includes crop trimming	Consider restricted hours of work to when FFMC greater than 83 (generally no work 12:00pm – 7:00pm) **Consider having an observer watching for fires from where all the work area can be seen** Check and if necessary clean machine daily
Mechanical pasture / scrub development /discing / ploughing / cultivating	**Consider restricted hours of work to when FFMC greater than 83 (generally no work 12:00pm – 7:00pm)** **Consider having an observer watching for fires from where all the work area can be seen** Check and if necessary clean machine daily
Tracked and digging machines on grass / dead vegetation (Includes civil contracting and quarrying)	**Consider restricted hours of work to when FFMC greater than 83 (generally no work 12:00pm – 7:00pm)** **Consider having an observer watching for fires from where all the work area can be seen** Check and if necessary clean machine daily
Use electric fences	If strong wind over 25km/h turn off fence or use low power portable unit
Chainsaws, chippers, steel scrub cutters	**Consider restricted hours of work to when FFMC greater than 83 (generally no work 12:00pm – 7:00pm)** **Consider having an observer watching for fires from where all the work area can be seen** Check and if necessary clean machine daily **Stop use Steel Scrub Bars**

Note: when conditions are Code Red, only essential work should be undertaken. Ignition is very easy and any fire will develop and spread rapidly making control very difficult

Code Red

NB: Any items in Bold indicate the requirement has been introduced at that Colour Code level

Equipment Requirements				
Requirements for….	**Extinguishers**	**Water**	**Handtools**	**Communication**
Road side and pasture/ gorse / scrub mowing and mulching.		Operation stopped		
Welding / Grinding / Gas cutting	2kg dry powder	9 litre pressurised water extinguisher within 5m of work site 1000 litres available under pressure with at least 60m hose within 2 minutes of site.	Shovel	Radio to base or cell phone with coverage
Crop Harvesting machine / site, includes crop trimming	2kg dry powder	9 litre pressurised water extinguisher. 1000 litres available under pressure with at least 60m hose within 2 minutes of site.	Shovel	Radio to base or cell phone with coverage
Mechanical pasture / scrub development /discing / ploughing / cultivating	2kg dry powder	9 litre pressurised water extinguisher. 1000 litres available under pressure with at least 60m hose within 2 minutes of site.	Shovel	Radio to base or cell phone with coverage
Tracked and digging machines on grass / dead vegetation (Includes civil contracting and quarrying)	2kg dry powder	9 litre pressurised water extinguisher. 1000 litres available under pressure with at least 60m hose within 2 minutes of site.	Shovel	Radio to base or cell phone with coverage
Use electric fences		Check all fences and feeds daily for shorts		
Chainsaws, chippers, steel scrub cutters	2kg dry powder	9 litre pressurised water extinguisher or full 15 litre knapsack. 1000 litres available under pressure with at least 60m hose within 2 minutes.	Shovel	Radio to base or cell phone with coverage

Note: when conditions are Code Red, only essential work should be undertaken. Ignition is very easy and any fire will develop and spread rapidly making control very difficult

Code Red NB: Any items in Bold indicate the requirement has been introduced at that Colour Code level

Activity Requirements	
Requirements for….	
Road side and pasture/ gorse / scrub mowing and mulching.	Stop roadside mowing
Welding / Grinding / Gas cutting sites	Not permitted above vegetation. Only on bare earth / non-flammable surface Wet down area 4m around work site before commencing Patrol for 30 minutes after completion
Crop Harvesting machine / site, includes crop trimming	**No work 12:00pm – 7:00pm. If FWI >25 stop work. FWI can be found on the website listed under how to use this guide.** **Have an observer watching for fires from where all the work area can be seen.** Check and if necessary clean machine daily
Mechanical pasture / scrub development /discing / ploughing / cultivating	**No work 12:00pm – 7:00pm. If FWI >25 stop work. FWI can be found on the website listed under how to use this guide.** **Have an observer watching for fires from where all the work area can be seen.** Check and if necessary clean machine daily
Tracked and digging machines on grass / dead vegetation (Includes civil contracting and quarrying). (Does not include machine working on bare earth surfaces)	**No work 12:00pm – 7:00pm. If FWI >25 stop work. FWI can be found on the website listed under how to use this guide.** **Have an observer watching for fires from where all the work area can be seen** Check and if necessary clean machine daily
Use electric fences	**Turn off farm mains units between 12:00pm and 7:00pm where grass under wire is more than 50% cured / dead and on fences essential to stock containment use low power portable battery unit.**
Chainsaws, chippers, steel scrub cutters	**No work 12:00pm – 7:00pm. If FWI >25 stop work. FWI can be found on the website listed under "how to use this guide".** Check and if necessary clean machine daily Stop use Steel Scrub Bars

Appendix 5 – Power Line Guideline

Power Line Auto Re-Closure System Triggers - Fire Risk Guidelines

Online Mapping: https://fireweather.niwa.co.nz/region/Nelson%20Tasman

Computer-controlled power restarts after electrical faults have put a line off the grid have the potential to start fires from sparking electrical current if the line is severed and lying on the ground in ignition-receptive fuels. The objective is to minimise the risk of fire starts from the automatic switching of power by using triggers to identify when auto-reclosing should be switched off.

Grass is the main fuel type beneath powerlines along roadsides and in adjacent agricultural lands into which fires could spread. Again, this is a spark-hazardous activity, and Wakelin et al.'s (2010) grass ignition thresholds for metal sparks can be used.

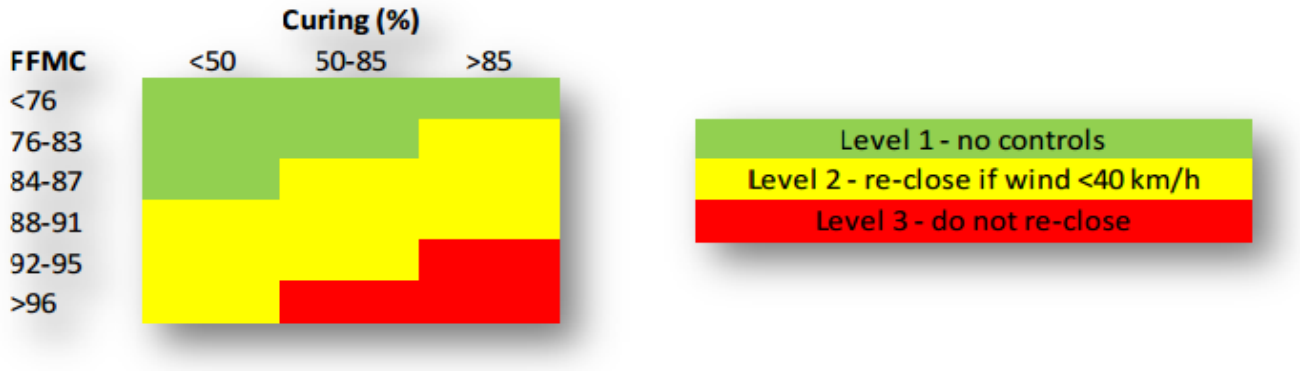
- Faults often caused by high winds (line arcing, contacts or breakage)
- Often ignite rank roadside grass beneath lines (mod/high grass fuel load)
- Ignition is dependent on presence of dead fuels (grass curing) and grass moisture content (from FFMC)
- Fire spread (and intensity) is also dependent on grass curing and ISI
- Matrix of FFMC and Grass Curing, with additional Wind Speed trigger retained to capture both wind effects online breakage potential and fire spread

Refer to Grass Curing Guide below…

- Wind Speed is used as an indicator of when power failures are likely to be caused by line breakage (lines snapping directly or being broken by fallen branches in high winds), and therefore to come into contact with the ground and fuels where they could ignite a fire, in high winds (as opposed to other faults or false alarms)
- Wind Speed also governs the rate of fire spread potential following ignition
- The Wind Speed trigger has been set at WS <40 km/h (which equates to gusts of 60-80 km/h) to take account of likely line breakage above this level of wind speed
- The range of conditions under which the Level 2 Wind Speed condition applies has also been expanded to include lower FFMC levels across all curing levels (up one step in each case).

Separating out FFMC and wind speed better reflects the separate fuel moisture and wind speed influences. It also avoids instances where a high wind speed but low FFMC results in a high ISI that might otherwise have triggered higher level auto-reclosure controls, but ignition is highly unlikely (due to wet fuels at the low FFMC).

Refer to the Grass Curing Guide below…



Grass Curing Field Card for On-site Estimation of % Cured Grass in a Pasture