



Farm and Acreage

A guide to reducing the risk from wildfire

**Rangeland
Recovery**

**Evacuation
Plans**

**How OHVs
Cause Wildfires**

**Reduce Wildfire
Risk at Home**

**Wildfire
Permits**



What is FireSmart™?

FireSmart is the idea of living with and managing the potential threat from wildfire, in a smart way!

This guide has been written particularly for farm, ranch and acreage owners. It focuses on the proactive things you can do to prevent a wildfire from starting on your property. It also considers things you can do to minimize damages, loss and injuries if a wildfire is approaching your property.

Wildfire has helped shape Alberta's landscape for generations. As the province's population grows and more people are out and about in the country, we have been experiencing more human-caused wildfires. Taking some steps now, to implement proactive practices on your farm, ranch, and acreage can help reduce your threat from wildfire.

Thanks for doing your part to prevent wildfire.

REPORT WILDFIRES TO 310-FIRE

Learn more about FireSmart:

firesmartalberta.ca
firesmart@gov.ab.ca

**For up-to-date information on
fire bans across the province:**
albertafirebans.ca

Questions?

wildfireinfo@gov.ab.ca
1-866-FYI-FIRE

FireSmart, Intelli-feu and other associated Marks are trademarks of the Canadian Interagency Forest Fire Centre (CIFFC).

The FireSmart Farm and Acreage magazine is dedicated to Leslie Lozinski, our colleague and friend. Leslie led the development of this publication and served as an outstanding Information Officer for Alberta Wildfire in the Lac La Biche Forest Area. The memories of her dedicated service remain close to our hearts, and her absence is deeply felt.

To order this magazine:
Alberta FireSmart Program
Email: firesmart@gov.ab.ca



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Welcome to the FPA

Two thirds of Alberta is in the Forest Protection Area

Where you are determines where to get your fire permit

The Forest Protection Area (FPA) covers two-thirds of Alberta or about 33 million hectares of forested land, stretching along the western provincial boundary and reaching across the northern section of the province to the Saskatchewan border. The FPA is shown in orange on the map to the right.

Inside the FPA, Alberta Wildfire is responsible for wildfire protection including permitting except cities/municipal districts inside the FPA (i.e. Fort McMurray). For communities outside the FPA, please contact your local fire department regarding specific fire permit requirements. Fire permits for burn barrels, brush piles and fire pits are required in many jurisdictions.

Wildfire season is designated as March 1 to October 31. During this period, fire permits are required for any burning within the FPA (excluding campfires). Fire permits are free and can be requested at any Alberta Wildfire office.

There may be additional restrictions such as a fire ban in effect, depending on conditions. To find out more visit albertafirebans.ca.



Planning to burn?

Make sure you get your permit

Fire permits are required from March 1 to October 31

Fire permits are required for any burning (except campfires) within Alberta's Forest Protection Area. Get your fire permit online, by phone or in person.

To request your permits online, follow the steps below:

STEP 1: Create an account

To access the online fire permit portal all individual users will need to create a basic account from account.alberta.ca.

Businesses will need to create an account for organizations from business.account.alberta.ca

STEP 2: Go online

Once your alberta.ca account has been obtained, you can login to firepermits.alberta.ca to access the online application.

STEP 3: Fill in the online permit application.

This application is not your permit to burn. Once submitted, the application will be reviewed by a forest area representative who will contact you to finalize the request details and plan any required site visits. They can issue your permit electronically once their review is complete.

STEP 4: Burn safely

Ensure you are following the conditions of your burn permit. Always have enough equipment and water nearby to keep the burn under control and make sure it has been extinguished properly.

Your free fire permit can also be requested by contacting your local forest area office. Phone toll free 310-0000 to locate your nearest office.



Burning without a permit can lead to charges, fines or court appearances. Permits are free and available from Alberta Wildfire.

FIRE PERMIT OFFICES IN THE FOREST PROTECTION AREA

CALGARY FOREST AREA

8660 Bearspaw Dam Rd NW,
Calgary, T3L 1S4
403-297-8800

EDSON FOREST AREA

111 - 54 St,
Edson, T7E 1T2
780-723-8269

FORT MCMURRAY FOREST AREA

5th Floor, 9915 Franklin Ave,
Fort McMurray, T9H 2K4
780-743-7125

GRANDE PRAIRIE FOREST AREA

10811 - 84 Ave,
Grande Prairie, T8V 3J2
780-538-5560

HIGH LEVEL FOREST AREA

Admin Bldg Forestry Yard
Footner Lake, T0H 1Z0
780-926-5400

LAC LA BICHE FOREST AREA

9503 Beaverhill Rd,
Lac La Biche, T0A 2C0
780-623-5388

PEACE RIVER FOREST AREA

9621 - 96 Ave,
Peace River, T8S 1T4
780-624-6190

ROCKY MOUNTAIN HOUSE FOREST AREA

4919 - 51 St,
Rocky Mtn House, T4T 1B3
403-845-8272

SLAVE LAKE FOREST AREA

301 Birch Rd NE,
Slave Lake, T0G 2A0
780-849-7377

WHITECOURT FOREST AREA

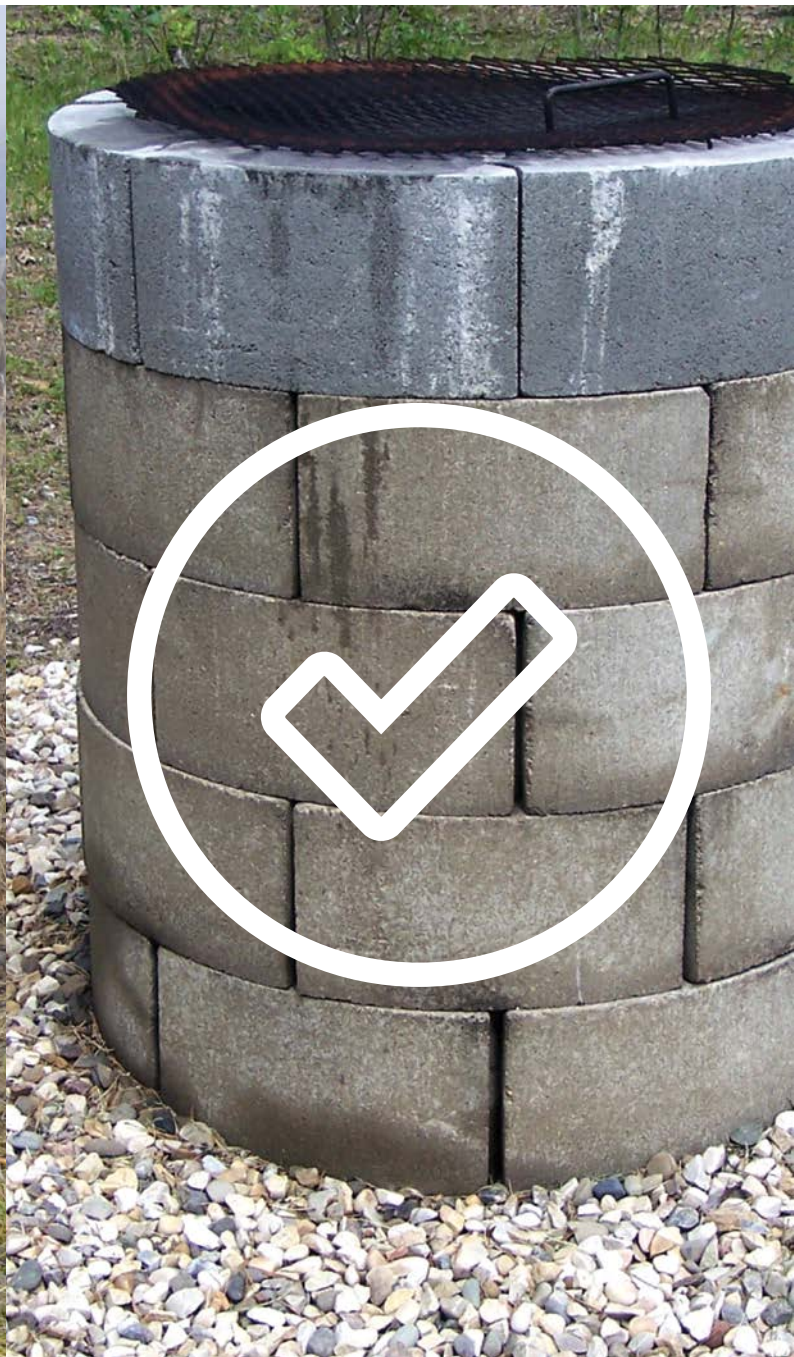
5020 - 52 Ave,
Whitecourt, T7S 1N2
780-778-7272

How safe is your burn barrel?

Don't let your burn barrel be the cause of a wildfire. Making it safe is easy.

Never burn these items:

- Preserved wood
- Material from automobile bodies and tires
- Rubber or plastic, or materials that contain rubber or plastic
- Used oil
- Animal manure or pathological waste
- Waste from sawmills or planing mills





Always cover your burn barrel with a metal screen. This contains any stray sparks and burning debris that could fly out of the barrel and start a wildfire.

Mesh screen with six mm (1/4 inch) holes is recommended. Drilling holes in your burn barrel will ensure proper ventilation and burning.

Clear any debris or grass for at least three metres (10 feet) around your burn barrel or fire pit location. Scrape down to mineral soil. Surrounding your barrel or pit with small stones, gravel or sand will help to contain embers and hot ash.

Choose a site that is at least 30 metres (100 feet) away from any structures or standing trees. The ideal location will be close to a water supply and sheltered from the wind.

Burn barrel tips

Follow these rules to reduce the risk of wildfire around your home and property:

- Always get a permit.
- Never burn when winds are greater than 12 km/h (8 mph).
- Avoid burning in the heat of the day.
- Ignite burn barrels in the evening, if possible.
- Have water and tools on hand.
- Never leave your fire unattended.
- Reduce the need for burn barrels by composting, recycling or using waste transfer sites.

You need a permit for your burn barrel

Provided your burn barrel meets the requirements for safe burning, a patrol person may issue a burning permit for the season. Permits are free and can be requested from your local Alberta Wildfire office.

Take note: when conditions are hot and dry, a fire ban may be issued. When this occurs your burn barrel permit may no longer be valid. Check albertafirebans.ca for up-to-date information on wildfire conditions in your area.

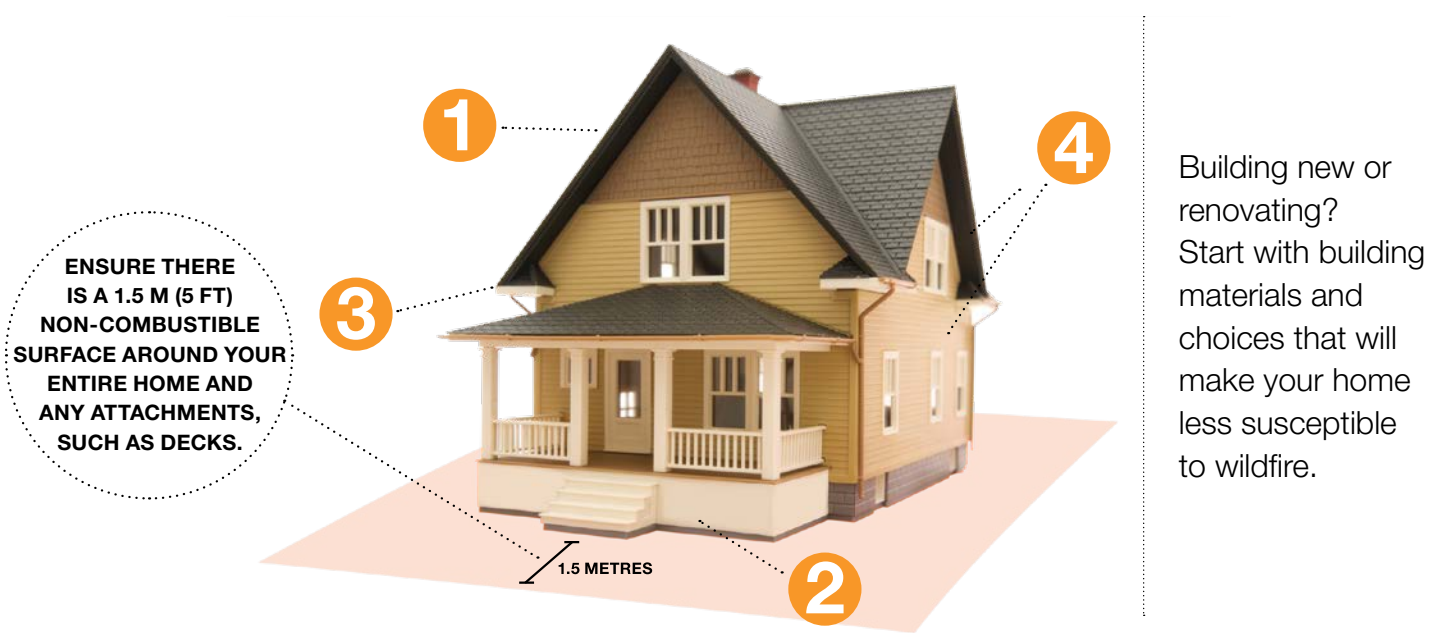
Stay focused on your burning

There's always a risk that sparks and embers could escape your burn barrel and ignite grass or other materials and start a wildfire. Keep watch for creeping fire. Have water and tools on hand to extinguish potential spot fires that may ignite. Never leave your fire unattended.

Building blocks for a FireSmart home

Here are some things you can do to reduce your home's risk from wildfire





Building new or renovating? Start with building materials and choices that will make your home less susceptible to wildfire.

1. Roofing

Your roof is a large surface where combustible debris can accumulate.

As shingles age and curl more openings are exposed, increasing places for embers to accumulate. Inspect your roof often and replace or repair any shingles that are in poor condition. Class A - ignition-resistant roof is a best practice.

You can also reduce your home's risk from wildfire by making sure that the roof is completely free of any combustible debris like branches and pinecones. Keep the eaves free of dead leaves and twigs.

2. Decks

Above-ground decks can trap heat from wildfires and ignite the deck as well as the exterior siding of your home. The fire danger further increases if vegetation, debris or stored combustibles, like firewood, accumulate under the deck. Closing in your deck also helps reduce your risk from wildfire. Sheath the deck and use pressure-treated lumber or flame-resistant building products. Putting rocks or gravel under decks is another option if you can't enclose it.

3. Vents and eaves

Eaves, vents and openings are the second most vulnerable component of a home, following the roof.

While vents perform the important function of removing trapped moisture from attics, soffits and crawlspaces, they are ready-made openings that can allow heat and embers to enter a home and ignite it. Open eaves present a similar opportunity for fire to ignite.

All vents and openings should be screened with 3 mm screening or ASTM fire-rated vents. Metal products are recommended for vents and vent flashing.

It is important to inspect your vents and openings regularly. Ensure the vents are in good repair and remove any combustible debris.

4. Windows and walls

Instead of single pane glass on your windows, use tempered or double pane glass.

This will reduce the risk of wildfire to your home and will also save money by trimming down the cost of heating and cooling your home.

You can further protect your home and other structures by choosing fire-resistant options such as stucco or brick, instead of wood or vinyl siding.

Driveway etiquette

4 metres x 4 metres is the standard



Ensure emergency access to your property

Driveways require a minimum of four metres (12 feet) vertical clearance and a minimum of four metres (12 feet) width to provide safe access for firefighting and other emergency vehicles.

Any driveway longer than 90 metres (300 feet) should have a turn-out space to allow fire trucks or other firefighting equipment to pass or to turn around.

Don't block your access route with gates, archways or other things that will impede the entrance of emergency vehicles.

Park your vehicles off to the side and keep clutter from blocking the driveway.

If you have a dugout or other water source like a lake or river, ensure that there is access to allow trucks to fill with water.

Your address matters

A visible, fire-resistant address sign is invaluable



Help emergency responders find you faster

Imagine a convoy of firefighters rushing down the highway, turning off onto your road and having to look for the driveway next to the crooked tree and beside the big rock! A highly visible, fire-resistant address sign can be your best friend during wildfire season.

Not all counties and municipalities have a rural addressing initiative like the one shown here. If not, you might want to consider having your own address sign made. Use fire-resistant materials, and display it in a visible area near your driveway, away from tall grass and bushes. The posts for the sign also need to be fire resistant! A metal sign on a wooden post isn't going to help you in a wildfire.

Fire ban system

Fire ban system levels

The majority of wildfires in Alberta are caused by human activity. Alberta Wildfire takes various precautionary steps, depending on conditions, to reduce human-caused wildfires.

When wildfire conditions require it, fire restrictions, bans and forest area closures can be implemented within Alberta's Forest Protection Area (FPA). Off-highway vehicle restrictions can also be introduced at any level of the Fire Ban System.



FIRE ADVISORY

Safe campfires are allowed in campgrounds and back country or random camping areas. This advisory is a warning that campfire and fire permit restrictions may soon come into effect if the current fire danger conditions do not improve.



FIRE RESTRICTION

A fire restriction prohibits the use of wood campfires on public land. You may have a safe wood campfire inside provincial campgrounds and on private property. Fire permits may be restricted, suspended, or cancelled and no new fire permits will be issued.



FIRE BAN

A fire ban prohibits wood campfires on public land, campgrounds, and private land including backyard fire pits. Fire permits are suspended or cancelled, and no new permits will be issued.



OFF-HIGHWAY VEHICLE RESTRICTION

An OHV restriction prohibits the recreational use of off-highway vehicles on public lands including designated OHV trails. An off-highway vehicle is a motorized vehicle operated beyond defined roadways, including but not limited to: quads, side by sides, dirt bikes, jeeps, pickup trucks and sport utility vehicles.



FOREST CLOSURE

The fire danger has reached such extreme levels that portions of the forest are closed and no access is permitted for reasons of public safety.

Visit albertafirebans.ca for more information.

Alberta Wildfire Status App

The Alberta Wildfire Status App is a great way to stay informed about wildfire information in Alberta.



Download the app today for information on:

- wildfire locations and sizes
- fire ban information
- conditions in your local forest area
- how to report a wildfire

Choose your preferred forest area under the “i” info section on the bottom of the app for instant notifications.

Click on the bell on the top right corner, choose your selected forest area and receive instant notifications when new updates are available.

Off-highway vehicles start wildfires

Stop frequently and clear hot spots

Did You know?

On average, over 30 wildfires are started by off-highway vehicles (OHVs) each year in Alberta's FPA. Some of these result in very large and expensive wildfires, threatening homes and communities. Most OHV fires happen in the spring when the snow has melted and there is an abundance of dry grass in the forest.

How do OHVs start wildfires?

The exhaust system of an OHV can heat up to temperatures in excess of 200°C. When riders travel through wet areas, debris can build up on the exhaust and next to engine hot spots. As the rider travels, the muskeg, grass or other debris dries out and is ignited by the hot engine. These burning pieces of debris can fall to the ground and cause a wildfire.

You can help prevent OHV wildfires

Before you ride, inspect your OHV and clear out any debris that has built up near the exhaust or other hot spots.

Avoid riding in wet areas. If you do ride in a wet area, through muskeg or tall grass, stop frequently and remove all debris from your engine and hot spots before it can dry out, heat up, fall to the ground, and cause a wildfire. Stomp on smouldering debris or soak it with water until it is extinguished.

Ensure the muffler and spark arresters on your OHV are in good working condition. Any alterations to the factory components of an OHV can greatly increase the chance of starting a wildfire.

Always carry a small fire extinguisher, collapsible pail and shovel on your OHV.

Make sure you extinguish any campfires you have when you are out riding.

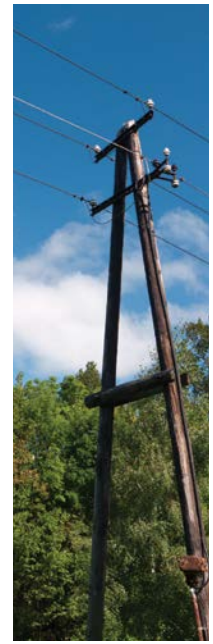




Fall wildfire prevention tips

Get a jump on the spring wildfire hazard

Fall is a busy time of year in the farming community, with completing the harvest and getting the last of the bales hauled in before the snow. Wildfire is probably the last thing on your mind, but with a little planning in the fall you can reduce the threat of wildfire for the coming winter and spring.



Cut

Cured or dry grass can be hazardous not just in the spring, but in late fall and winter as well. Under the right weather conditions, with high winds and no snow cover, grass fires in the later fall and winter can spread quickly and threaten farms, ranches and acreages.

Mowing your grass in the fall is a good way to help prevent the spread of wildfire. Studies and field tests have proven fall mowing to be an effective fire break, slowing the spread of wildfire and giving firefighters a chance to contain the fire. Mowing grass short in the fall will put you ahead of the game in the spring.

Cultivate

Before you put your tillage equipment away for the winter, make one or two passes around your yard and feed storage areas. This will help prevent the spread of fire into your yard and give the local fire department an anchor point to work from. If you have property that adjoins a community, sub-division or other residence, be a good neighbour and make a few passes next to them.

This will protect them, as well as you, from wildfire. This practice will also have you ready for the spring wildfire season, with one less thing to worry about when you could be seeding.

Clean

Fall is a good time to clean out flower beds next to the house and other outbuildings. Dead and dry flower and plant stems that build up in flower beds can easily ignite from embers blown around by the wind from an advancing wildfire. Once this vegetation catches fire, it can easily cause the house or outbuildings to ignite.

Cleaning the leaves out of roof valleys and from your eaves is another good fall project. Similar to the dry vegetation in the flower beds, leaves piled up in roof valleys and eaves are a potential ignition point for airborne embers.

Cleaning up the down and dead wood in your yard, shelter belts, woodlots, and near your home and fences is a good family project for the fall.

Bigger pieces can be used for firewood and small branches can be used for wiener and marshmallow roasts. This is also a great way to teach the kids about wildfire prevention practices so they become responsible farmers.

Check

Another good fall practice is to check power lines and poles for proximity to trees and branches. A large number of wildfires are caused each year from downed power lines coming into contact with trees. Check your poles for rot and replacement; if the pole belongs to your local utility provider, contact them with your concerns. Walk the lines and look for any tree branches or trees in poor condition that may come in contact with the line in high wind. Contact your local utility provider to remove or trim the trees or branches.

Winter wildfires

Don't let winter burns get out of control

You might not think winter and wildfires go hand in hand — but a surprising number of wildfires start in the winter.

A lack of snow cover can leave brown, dry grass exposed and ready to ignite. When winter winds pick up, the only ingredient missing for a wildfire is the ignition source. Sparks from controlled fires like campfires, burn barrels or agricultural burning can inadvertently cause winter wildfires.

Winter campfires

Many winter wildfires start as abandoned campfires. With below average rain and snow, the top several inches of the ground can be very dry. A fire left smoldering can dig deep into the ground as it burns organic matter. Often these fires are quite large by the time they are discovered. Fires like these can be difficult to extinguish.

Never assume that Mother Nature will send rain or snow to put your fire out. No matter if you are having a campfire or burning a brush pile, the steps to extinguish a fire are the same: *soak it, stir it, soak it again.*

Check your winter burns

Winter is a great time to burn brush piles, windrows and other projects. With a good amount of snow, the risk of your fire spreading is limited. You should still have appropriate tools and water on hand to manage your fire. Use caution if drought conditions are high to extreme, as the fire may tend to dig in and burn underground.

Inserting a metal rod into your fire is a good way to tell if it is extinguished or if it's still burning underground. If the metal rod comes out hot or warm to the touch, you know the fire is still smoldering. Following the *soak it, stir it, soak it again* rule, you may have to use heavy equipment to stir up your fire or dig down to allow water to reach the fire.

Listen to the weather

If you're planning a winter burn, make sure to listen to the weather forecast. It's important to pay attention to snow conditions and wind predictions before you set your fire.

Q&A

Here are some questions around wildfires that we get asked a lot

If a fire starts on my property and spreads to my neighbours, am I responsible for the costs of extinguishing that fire?

Yes, if you are determined to be the responsible party you could be responsible for covering any costs incurred to extinguish that fire.

If I have a fire permit and the fire gets away, am I liable?

An investigation would be launched to determine if you followed the conditions on the permit.

What happens if I burn without a permit?

The consequences of burning without a permit range from an official warning letter to a court appearance, which could lead to fines under the *Forest and Prairie Protection Act*. The biggest risk of burning without a permit is that it is possible that firefighters, equipment or aircraft could be sent to fight your fire. You could be responsible for all costs. A permit lets Alberta Wildfire and other firefighting agencies know where to expect smoke. If you don't have a permit, we assume smoke or flames indicate a wildfire and firefighters will be sent.

If a patrol person comes and does a wildfire risk assessment on my property, am I obligated to make any changes?

No, you are not obligated to make any changes. Think of the assessment as a way for you to get valuable tips about preventing wildfire from impacting your farm or ranch. You can implement any of the ideas if and when you choose.

It rained, why can't I burn?

Even though you have received rain, it may not have been enough to effectively dampen the ground. Most areas of the forest (especially farmland) have rich soil that is comprised of a lot of peat and organic matter. This soil requires extra moisture to filter down into deeper layers of the soil in order to sufficiently lower the hazard. Light rainfall will only moisten the top layer of soil, while soil a few inches below will remain dry. If burning is done when there is not enough moisture in the soil, chances for a holdover fire are greatly increased.

What is a holdover fire?

A holdover fire is when a fire thought to be extinguished smoulders below the surface. These smouldering areas can remain dormant for extended periods of time and on hot, windy days they can resurface and become a wildfire. Any winter burning should be checked in the spring for potential holdover fires.

Why do I need a fire permit?

Getting a permit tells us where to expect smoke or fire and provides the opportunity for advice on completing a successful burn. If you burn without a permit, and smoke or fire is reported, firefighters or aircraft could be dispatched. Help us send our resources where they are really needed by getting a fire permit.

If I only have time to do one thing to my yard to prevent wildfire, what should I do?

Cut grass around your buildings and house, and remove all combustible material from the first 10 metres around your home and buildings.

REPORT WILDFIRES TO 310-FIRE

Seven simple tips

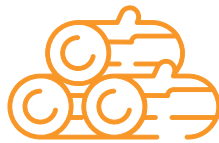
To FireSmart your farm and acreage



Mow the grass

If you only have the time to do one thing to safeguard your home or property from wildfire, you should mow your grass!

Short grass helps slow down fast-moving grass fires. By keeping the grass short around your house, outbuildings and gas tanks, you will help protect against the spread of wildfire. You can even use livestock to graze around outbuildings to keep the grass trimmed.



Move your woodpile

Resist the temptation to pile your firewood close to your house or deck. It's recommended that firewood be stored a minimum of 10 metres (30 feet) away from any structures.



Check powerlines

Check your power lines and report any trees or branches that need removing to your electricity provider. Get ready now so the spring winds won't blow trees onto your power lines. This could knock out your power or even start a wildfire.



Prune your trees

A swift-moving grass fire will travel easily from the ground into trees if there are low-hanging branches. Trees growing too close together will also help a fire spread quickly. A little pruning will improve your yard's potential to withstand a wildfire.

Try these three pruning tips:

- Remove tree branches up to two metres from the ground.
- Remove thick shrubbery and deadfall out to 1.5 metres from the edge of the drip line.
- Keep a space of three-to-six metres between the tops of your trees.



Check your chimney

Make sure your chimney is up to code and has spark arrestor screens installed. Your diligence can help prevent stray embers or sparks from travelling onto your roof or into your yard where they could start a wildfire.



Clean your roof and eaves

Leaves, spruce cones, pine cones, twigs and other combustible debris that can fall on your roof and collect in your eaves can be a fire hazard. Sparks or flying embers from burn barrels, firepits, chimneys or even wildfires can land on your roof and ignite the litter. Removing the debris reduces the chance of a fire starting on your roof.



Put a fire extinguisher in every vehicle

You might not be able to put a wildfire out with a fire extinguisher, but you could prevent one from starting. Balers are notorious for causing fires. A fire extinguisher can help control fires started from hot bearings on farm equipment that could ignite entire fields.

Nothing says "I love you" like a fire extinguisher. Next time you're searching for that perfect gift for your loved one, think: fire extinguisher!

Evacuation planning

Plan now for safe home and livestock evacuation



Property evacuation planning

We all hope that we will never need to evacuate our property. However, unforeseen events can change things rapidly, forcing us from our homes when we are unprepared.

Pre-planning your evacuation allows you to make better decisions when faced with a potential wildfire or evacuation order. Consider necessary items and those irreplaceable things that should travel with you. Then plan for things you can do inside and outside your home to protect it from wildfire.

Large moving wildfires are unpredictable and dangerous and should be left to professional firefighters. Pre-planning your evacuation will allow you to move to safety and leave your property safe and accessible for emergency responders.



Things you can do to prepare to evacuate:

Don't start any new fires and report any open fires or smoke to authorities.

Check your fire pits and burn barrels to make sure they are fully extinguished.

Keep the radio on, tuned to a local station. Have a battery-powered radio ready in case of power failure.

Move grazing animals to a central, safe refuge (see more about this on the next page).

Keep pets close to the house.

Place valuable documents, family mementos, computer back ups and other irreplaceable items in your vehicle.

Pack extra food, medications, pet food, money and credit cards, sleeping bags, clothing, toys and games in your vehicle for quick departure.

Ensure your vehicle is fueled and operational. Park it in the garage facing outward, or adjacent to the house in a cleared area that is not blocking access. Make sure the windows are rolled up and the keys are in the ignition.

Consider downloading the Alberta Emergency Alert app to your phone or mobile device.

Visit emergencyalert.alberta.ca for more information.

Inside your home:

Close all windows and doors. This will slow down the spread of fire if it does ignite inside the house.

Move anything that can burn away from windows and sliding glass doors.

Fill sinks, bathtubs and buckets for use as extra water reservoirs.

Attach inside hoses and gather buckets and towels.

Outside your home:

If you have time before you evacuate, there are things you can do to increase your home's chances of withstanding a wildfire and to help professional firefighters when they arrive at your property:

- Cover all openings with metal coverings or fire-resistant material such as 12 mm plywood. This helps to keep sparks and embers out.
- Move any materials that can burn well away from the house and outbuildings or store them inside.
- Attach garden hoses to taps and place them so they can reach any exterior surface of the buildings, including the roofs.
- Place a connected sprinkler on the roof and nail it down. Do not turn it on unless the fire is an immediate hazard.
- If you have an outdoor pool or hot tub, make it as accessible as possible so firefighters can use the water.





Livestock evacuation planning

You've got the kids, the family photos and the laptop...but what about your livestock?

A livestock evacuation plan is essential for every farmer, rancher and acreage owner.

Reduce the risk to farm animals and livestock by preparing and maintaining safe zones where livestock can go during a wildfire.



The risk to farm animals and livestock can be reduced by preparing and maintaining fuel-reduced areas where livestock can be moved and held during a wildfire. Use a plowed or heavily grazed field with a minimum of stubble or grass. If possible, this field should be shaded, and located well away from any forested areas and to the leeward side of your property.

Water should also be available. Cultivating or plowing the outside perimeter of the field to make a fire break will help prevent wildfire from jumping into this safety field. Concrete or metal buildings located away from forest vegetation provide another livestock shelter option.

If your animals cannot be moved to a safe area on your property, you will need to make transportation and feeding arrangements at an alternate location.

Poultry ranchers should be aware of the threat from smoke and have a relocation plan ready to activate. As a last resort, if you are unable to move livestock into a safe area, cut fences and open gates, turning the animals loose to take their chances with the fire. This should only be done if there is no danger to people or traffic.

You might want to consider insurance coverage for all farm resources at risk from wildfire including crops and livestock. Government disaster financial assistance is limited and only covers uninsurable perils.

Take the time to make an evacuation plan for your livestock. Wildfires move swiftly and if there is one approaching your property, you will be glad you have a plan to ensure the safety of your animals.

Rangeland and recovery

Wildfires and fire intensity produce different results and challenges for range recovery





Fire has been a constant presence in Alberta for many years. It has fluctuated with regional climate change, post-glacial forest-to-grassland succession and cultural change. Whether started by lightning or traditional burning, fire has always been a historical part of Alberta's landscape.

Wildfires can generate both positive and negative consequences. Generally, fire is a positive disturbance for grasslands. It is essential for regenerating fire-dependent plant species, controlling plant pathogens and preventing tree and shrub encroachment. The intensity of each fire depends on fuel loads (the amount and type of burnable material on the ground), fuel moisture (the dryness of the materials on the ground), temperature and duration. Individual fire events are influenced by conditions at the time of the fire.

Generally, grassland fires are relatively low-intensity, short-duration events. Rarely will these fires burn into the soil. Sometimes, though, fire can have detrimental effects on rangelands, especially in areas with excessive fuel loads. Fires with high fine fuel loads, such as dormant or dead grass, can lead to high-intensity, severe wildfires. These wildfires may lead to distressing results such as forage loss for livestock, infrastructure loss, soil erosion and the potential for weed invasion.

The time of the year also impacts fire outcomes. Naturally-occurring wildfires are started by lightning and happen mostly during the spring and summer. Fall and winter wildfires generally have higher intensity and higher severity due to dormant vegetation and high fuel loads left from the growing season. These fires can burn in the roots of plants and trees and the mulch layer in the soil which can lead to soil sterilization. The ecological implications and long-term recovery from fall and winter wildfires are much different from that of spring and summer wildfires.

After spring wildfires, recovery can be quite rapid, whereas depending on the severity of the fall and winter wildfires, recovery can take up to five years to fully return to pre-wildfire conditions. It is imperative that you monitor your rangeland to ensure that it is recovering adequately.

Assessing fire severity

To assess the severity of the fire on your rangeland, you should consider these indicators:

Light fire

- Abundance of unburned litter (leaves, twigs, grass) on the ground and the grass thatch is intact.

Moderate fire

- Ground litter is mostly burned with a few holes in the thatch layer.

Severe fire

- Litter is completely burned and there is significant penetration of the thatch layer.

Range recovery indicators

Indicators that you can monitor to assist in understanding range recovery:

Bare soil

- Fire can create an increase in bare soil; monitor the amount of bare soil and any soil erosion.
- Bare soil should be revegetated within two years post-fire.

Litter accumulation

- Fire will remove the majority of litter. The goal of post-fire management should be to increase litter accumulation back to pre-burn conditions.
- Litter is critical in maintaining range health; it functions as nutrient inputs, retains moisture at the soil surface and promotes plant rejuvenation.

Weeds

- Weeds are an opportunistic species. High severity fires can create opportunities for weed invasion, usually due to the increase in bare ground.
- Monitor to ensure weeds are not moving into the burnt area. You may have to control weeds to deter further spread.

Species diversity

- Rangelands are very diverse. Fire can remove species that are more susceptible to extreme heat, however most native species are tolerant of fire. Fire recovery should lead to an increase of biodiversity similar to the conditions of the area before it was burnt.



Need a rangeland checkup?

Range health is important to everyone! An Alberta rangeland health assessment can help you with fire recovery monitoring and planning. For more information contact your local Alberta Wildfire office.



Got a herd?

If you have grazing animals, ensure you apply range management principles and practices for post-wildfire grazing.

Balance...

- livestock needs with forage supply.

Minimize...

- the effects of spring grazing.

Distribute...

- livestock evenly across the burned area and provide effective rest for the area.

As a rule, it is recommended that you defer grazing for at least one to two years after an area is burned. This period of time can vary depending on moisture availability and fire severity. Some sensitive rangelands may need up to five years of rest before grazing.

Though there can be negatives associated with fire, it is important to remember there are multiple benefits from fire as well. Benefits include:

- ecosystem renewal
- increase in forage availability and quality
- removal of dead vegetation
- improvement in wildlife habitat
- nutrient cycling

Fire acts as a rejuvenating agent and Alberta's ecosystems have evolved with fire.

It is critical to implement a post-fire management plan to ensure fire recovery is rapid and the trajectory is towards the pre-fire, healthy state.

The big three

Grass and stubble, piles, and windrows can be tricky to burn. Here's how to tackle them.



Burn Safe!
Prevent ground
and peat fires.



ONE | Burning grass and stubble

Spring and fall burning is always a challenge for farmers. The weather conditions need to be perfect, with not too much wind or heat, and the field needs to be prepared to contain the fire from spreading too far, too fast.

- Get a fire permit and always follow the conditions when burning grass and stubble.
- Avoid burning in the heat of the day – when possible, burn in the evening after 6 p.m..
- Check your local weather forecast – never burn with winds greater than 12 km/hr (8 mph).
- Blade or plow a minimum of five metres around your burn, down to mineral soil. This makes a guard to help prevent the fire from spreading.
- Break larger fields down into smaller sections, with fireguards built around each section. This results in more manageable sized fires. Only set fires that can be controlled by available manpower and equipment.
- Ensure that you have adequate supervision, people, equipment and water nearby.
- Always burn from the outside perimeter and against the wind.
- Never leave a burn unattended. After the burn is complete, continue to patrol until the fire is completely extinguished.
- Verify extinguishment by returning to the burn site to confirm nothing has reignited.



TWO | Burning piles

As with all burning, it's important to get a fire permit and follow the conditions when burning piles. Pile burning is particularly tricky since it can result in a deep ground fire that lasts long after the surface burning is out. Here are some guidelines for effective pile burning:

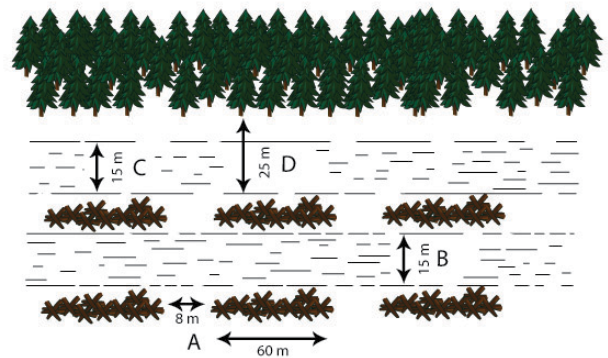
- When possible, burn piles when there is snow cover and frozen ground conditions.
- Never leave a burn unattended.
- Re-pile and reburn if necessary, until your pile is gone.
- Check piles for hotspots that may smoulder long after the surface burn appears to be out. Use a metal rod to probe the piles. If it feels warm to the touch, your fire is still burning.
- Check your piles in early spring to make sure they are completely extinguished. Winter burns that are not properly extinguished can smoulder underground for months and reignite as a wildfire in the spring.



THREE | Burning windrows

You need a permit when burning windrows, and you need to make sure you have sufficient people, equipment and water on hand to manage your burn. Here are some other tips to organize your windrow burn:

- Avoid building windrows in areas of muskeg.
- Use a brush rake or excavator to build windrows when possible. This minimizes dirt in the rows and encourages better burning.
- Pack the windrows as tight as possible.
- Build windrows across the direction of prevailing wind.
- Ensure that windrows are not longer than 60 metres (200 feet). (See A in diagram)
- Ensure that all windrows are 25 metres (80 feet) from standing timber. (See D in diagram)
- Ensure that a minimum of 15 metres (50 feet) of bare mineral soil is created around all windrows. (See B and C in diagram)



A photograph of a vast green field, likely a crop field, with a central path leading towards a farm in the distance. The sky is bright and clear, suggesting a sunny day. The field is filled with tall, green plants, possibly corn or wheat, and the path is a straight line of bare earth or a narrow road. In the background, there are rolling hills and a few trees, and a large farm building is visible on the right side.

Farm and ranch practices

For wildfire prevention

Fence lines and ditches

Unmanaged fence lines, ditches or roadsides usually have a large accumulation of grass, weeds and brush that can act as a wick, carrying intense, quick-spreading fires into your yard, fields or building sites.

Manage the vegetation along fence lines and ditches leading up to your building sites or to other values for at least 100 metres (300 feet) in all directions. This can be done by mowing these areas. At minimum, mow them once late in the fall. Herbicide or a weed-eater can also help minimize the vegetation under the wires and between the posts.

Remember to ensure that all your corral lines are also free from vegetation that could wick fire into your fenced feed areas.

Barns and outbuildings

You can apply any of the vegetation management strategies to granaries, barns and outbuildings to reduce the threat of wildfire. If you cannot easily get into these areas to mow the grass, livestock can do a good job of cleaning up for you.

Remember to manage vegetation in old corrals and unused corners of your yard. Mowing, grazing, weed-eating, treating with herbicide or gravelling are all ways you can manage this vegetation. Manage vegetation around dugouts and other water sources as well. This reduces the fire hazard and helps provide ready access for firefighters and their equipment. Keep these areas free of equipment, batteries, scrap iron, lumber, posts and other refuse. These items become a safety hazard for firefighters.

Fields and pastureland

Give yourself, your neighbours, your livestock and firefighters a chance against wildfire by reducing the accumulation of dry grass and stubble. This will help to prevent a fire from escaping your property or from coming in to your yard.

Cut the grass! It sounds simple, but well-maintained short grass can be a good fire deterrent. When a swift-moving grass fire hits a mowed patch of grass, it slows the spread of the fire and sometimes the fire will burn itself out.

Grain fields located near or next to building sites should be worked up. At the very least, work up a strip next to the building site to act as a fire guard. Dry stubble in the fields can carry a fire into the yard and with new farming practices of zero or minimal till, the accumulation of fine, dry fuel is increased. Make one or two passes around the yard before putting your tillage equipment away for the winter and you'll go a long way in reducing the risk from wildfire.

If you have hay fields next to the yard, cut them as late in the season as possible to minimize re-growth, or mow a strip next to the building site to act as a fire guard. Allowing livestock to graze in the fields next to the yard in the fall will also help to reduce the amount of vegetation and potential fire hazard.

Dry pastureland presents the same challenges to wildfire as hayfields and grain fields. Tilling around the outside perimeter of pastureland will create a fire break that could save your field from burning, or prevent a fire from spreading to your other fields.

Feed storage areas

Dry bales are a magnet for sparks and embers and are usually one of the first things to ignite as a wildfire approaches. No matter how you store bales, once they ignite, the fire spreads quickly and is difficult to control or extinguish.

Fires can start in stored hay from radiant heat or spontaneous combustion. Spontaneous combustion usually occurs within six weeks of baling, but can occur in old hay and straw as well. Fire can occur in loose or baled hay and straw and is most often caused by excessive moisture. One of the best ways to prevent this is to ensure that the hay is cured to the proper moisture content before baling.

To minimize the spread of fire from straw and hay bales to the house or outbuildings, store bales a good distance away from any structures. The area between the bales and buildings should be maintained by reducing the amount of vegetation, preferably down to mineral soil or gravel. If you have grass in this area, it's critical that it be kept mowed as short as possible. It is a good idea to store your winter supply of bales in a couple of different locations to minimize loss in the event of a fire. Use the bales closest to the house and outbuildings during the feeding season. That way when spring comes, you have a larger buffer between the house, outbuildings and the bales.

It's important to clean up all the old hay and straw that accumulates in storage areas from broken bales and bale bottoms freezing down over the winter. Haul it out on the pasture for the livestock to pick through, spread it over the field like manure, or let your livestock graze on it.

Fire on the landscape



For over 70 years, wildfire has been suppressed in Alberta. It is only recently that we have begun to realize how important fire is on the landscape, and how essential it is to the ecosystem. Fire is a natural part of the ecosystem, and removing it has impacted species' habitat and diversity and the way forests function.

Fire increases landscape diversity. It recycles nutrients, helps plants reproduce and creates a mosaic of vegetation that provides habitat and food for a variety of wildlife. Animals like bears, moose and deer are foragers and they thrive in open, grassy areas. Without fire, trees begin encroaching on these areas and reduce habitat and food supply for a variety of species.

Fire also helps control the forest's age and increases the forest's resiliency to pests. In the absence of wildfire, trees grow and age at similar rates, creating thick canopies, shading the forest floor, and reducing the undergrowth vegetation. The buildup of dead and dying vegetation is fuel for wildfires, helping the wildfire to burn more intensely and more quickly, making it difficult to contain. And, as more Albertans move closer to forests, these wildfires may threaten them and their communities.

Alberta is taking steps to re-introduce fire back into the ecosystem in a way that is better contained and less intense than naturally-occurring wildfire. Prescribed fire is this proactive approach to wildfire management. Prescribed fires help restore ecosystems, restore healthy and resilient forests, and reduce the potential for large, uncontrollable wildfires.

Safety is first priority for any prescribed fire; during the planning process, specific conditions are identified to ensure the safe and successful execution of every prescribed fire. The window of opportunity to start any prescribed fire project where every condition is met, including the safety of Albertans, is extremely small. Every prescribed fire is staffed by highly trained fire managers and firefighters that work to contain the direction, intensity and spread of the fire.

Whenever possible, prescribed fires are planned to mimic nature by using natural firebreaks—areas that slow or stop a wildfire's spread—such as a mountain or river. After a prescribed fire, the area burned can be used by firefighters to fight a wildfire that may occur in the area. These natural firebreaks will also reduce the spread and intensity of other wildfires that may occur in the area, reducing their risk of threatening Albertans and their communities.

By introducing fire in a contained manner, we can reduce wildfire costs by:

- offsetting the costs of wildfire suppression
- preventing large, uncontrollable wildfires that threaten Albertans and their communities
- restoring healthy, balanced forests that are more resistant to pests, and
- reducing the threat of disease.

Did you know...?

Jack pine and Lodgepole pine trees both rely on fire for germination. When temperatures reach 50C and above, the intense heat encourages Jack pine cones to open.

Woodlot owners face threats from wildfire



Over the last 10 years, an average of 1,250 wildfires a year have burned almost 220,000 hectares of forest annually in Alberta. Wildfires have forced the evacuation of thousands of people from their communities, and have even destroyed some homes and businesses. If you live on or own a woodlot, sooner or later you may have to contend with the spread of a wildfire that could threaten your livelihood. As a responsible woodlot owner you will want to make every effort to prevent an accidental fire or contain a fire that is in your woodlot area.

Be prepared

When working or recreating in your woodlot area, be prepared to extinguish an accidental fire by having a water bag complete with a hand pump, shovels, rakes and a pulaski that can be used to construct a handline to mineral soil. A small fire actioned early may avoid the catastrophic impacts of large, severe wildfires.

In the event of a large fire in your area, which is more likely in the spring or fall when the grasses are cured, there are a number of proactive options that will assist the municipal or provincial fire responders. Start with a good timber type map and show all roads and trails, and any sources of water that will support a high pressure fire pump. In addition, identify all power lines, oil and gas installations, pipelines, permanent propane tanks, and log decks or sawmill sites. This identification should include numbering or labeling on a map legend and a GPS location if available.

In your harvest plan, consider using deciduous strips as fire barriers and plan to thin and prune juvenile coniferous stands that are fire prone.

Communicate your plan

Visit your local Alberta Wildfire office to present your woodlot values and your fire management map and to discuss your FireSmart initiatives. Remember that once a fire is threatening your woodlot you may have to evacuate and rely on the professional firefighters. In this case, your map and FireSmart work are the keys to protecting your investments.

More information about reducing the risk of wildfire to your home and property can be found in the FireSmart Begins at Home Guide. To order this guide, please contact firesmart@gov.ab.ca

Wildfire insurance

Three important questions to ask yourself



Don't let wildfire take you by surprise. Review your insurance policy, implement a plan of action and prepare yourself for the risk of wildfire.

Does your insurance policy provide coverage against wildfire losses?

People don't always realize the dangers of living with wildfire and they don't always see the potential for losing their homes to wildfire. Homeowners need to be aware of the steps they should take to prevent wildfire and be aware of the insurance consideration before moving or building in high-risk areas.

Does your insurance policy provide coverage for additional living costs in the event that you are forced out of your home due to wildfire damage?

This would provide compensation for hotel and restaurant bills as well as any other living expenses you might incur during the reconstruction of your home. You will need to ask your agent about this coverage as reimbursement amounts differ between companies.

Does your insurance policy provide coverage for the farm resources potentially at risk from wildfire?

Most insurance policies provide coverage for the repair or replacement of your home. But what about things like your crops, livestock and equipment, and important structures such as barns, shops and outbuildings? Make sure those are addressed in your coverage.

Coverage is also available if your home was damaged by smoke or soot. Just because your home was not taken by an actual wildfire does not mean you are ineligible for coverage. Be sure to ask your agent if this coverage is provided in your policy.

REPORT WILDFIRES TO 310-FIRE

Learn more about FireSmart:

firesmartalberta.ca
firesmart@gov.ab.ca

**For up-to-date information on
fire bans across the province:**
albertafirebans.ca

Questions?

wildfireinfo@gov.ab.ca
1-866-FYI-FIRE
