FUTURE FIRES
WEATHERING THE FIRE STORM

ELLISON CREEK WILDFIRE IN COLUMBIA RIVER GORGE, OREGON.
SOURCE: CHRISTIAN ROBERTS-OLSEN / SHUTTERSTOCK.COM

WILDFIRE REPORT 2020
ALLIANZ GLOBAL CORPORATE & SPECIALTY®
It is only the beginning of the 2020 wildfire season and already there have been 20,351 US wildfires between January 1 and June 12. Compare this to 16,630 fires during the same period in 2019\(^1\). This report examines conditions contributing to an increase in both the number of wildfires and the length of wildfire seasons. We explore how wildfires start and expand to what is being done to fight them, including safety checklists and a look at new and improved technology. From a risk standpoint, the report also examines what Allianz Global Corporate & Specialty (AGCS) is doing to help our clients in the area of claims settlements and catastrophe coordination. Sustainable solutions that make a positive environmental impact and address weather-related concerns are included. And finally, we look at the additional challenges fire fighters must deal with in light of COVID-19.

**HOW WILDFIRES START AND SPREAD**

According to the US Department of Interior, as many as 90% of wildfires in the United States are caused by people. Some are caused by unattended campfires, burning of debris, downed power lines, negligent discarding of cigarettes, and intentional arson.

In many cases, increasing wind-driven events cause fires to spread over greater distances creating exponential expansion of a wildfire. Fire spreads from hillsides to various points in the valleys creating spot fires with no relationship to the main wildfire body.

Examples of late season fires being compounded by extreme winds include several Southern California fires in 2019.

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\(^1\) National Interagency Fire Center (NIFC); https://www.nifc.gov/fireInfo/nfn.htm

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2019 WILDFIRE RISK BY THE NUMBERS

**US**

- 4,664,364 acres consumed by wildfires
- 50,477 wildfires reported

**WESTERN CANADA**

- 2,325 wildfires reported
- 904,549 hectares burned in Alberta & British Columbia combined

**US**

- 4.5mn homes identified at high or extreme risk of wildfire, with more than 2mn in California alone
- 963 structures reported destroyed by wildfire

The Kincade Fire in Sonoma County ignited on October 23 and was active for 13 days. It burned over 77,000 acres—an area more than twice the size of the city of San Francisco. According to CalFire, there were 4 injuries, more than 350 buildings destroyed, and 60 more damaged. Some 90,000 buildings across an expansive evacuation zone were threatened. Wind gusts in some peaks were over 100 miles per hour.

The week-long Getty Fire in Los Angeles broke out on October 28 and burned over 700 acres. The National Weather Service issued an Extreme Red Flag Warning for the area due to what were some of the strongest Santa Ana winds ever seen, with wind gusts up to 80 miles an hour. Over 7,000 residences were placed in a mandatory evacuation zone.

The Santa Ana winds also contributed to the duration of the Maria fire, October 31 - November 6 burning 10,000 acres and destroying four structures.

WHEN ONE DISASTER FOLLOWS ANOTHER

Across the United States and Canada, the scale of forest fires has increased to the degree that the fires themselves are now contributing to the rise in greenhouse gas emissions. And some fires are even creating their own weather systems, making winds more erratic and conditions too dangerous for firefighters to protect people and properties. These fires are often called megafires and they are becoming more common. Some bushfires in Australia created powerful pyrocumulus clouds that led to smoke-infused thunderstorms. The lightning from these storms threatened new fires, which sometimes developed into fire tornadoes.

Warmer temperatures do more than just dry out the land. They also heat up the atmosphere, where clouds hold onto more moisture for longer periods of time, causing severe drought and fire. This is often followed by crashing rains that can’t be absorbed by severely dry lands. When floods and mudslides destroy property where fires burned nearby, a cycle of what scientists call “compound extremes” – one climate disaster intensifying the next – makes recovery more difficult.

CANADA: CAUSES AND OUTLOOK FOR 2020

Approximately 8,000 wildfires occur each year in Canada, and the average area burned is 2.5mn hectares per year. Fires caused by lightning represent 45% of all fires, but because they occur in remote locations and often in clusters, they represent 81% of the total area burned. Human-caused fires represent 55% of all fires. They occur in more populated areas and are usually reported and extinguished quickly.

Areas of western Canada are already experiencing frequent and severe droughts. Scientists expect new areas across the country to be affected and drought to become even more frequent and severe. Drought threatens Canada’s forest and increases the threat of wildfires.

2 Insurance Information Institute, Facts + Statistics: Wildfires, 2019
3 New York Times, The fires are over but Australia’s climate disasters aren’t, February 23, 2020
4 Government of Canada, Wildfires, October 30, 2019
5 National Interagency Fire Center/Natural Resources Canada/Servicio Meteorológico Nacional, North American Seasonal Fire Assessment and Outlook, June 2020
6 Government of Canada, Drought is expected to become more frequent and severe in parts of Canada, January 28, 2020
As wildfires continue to scorch California, startup InsureTechs and existing tech companies have been working to develop tech innovations addressing extreme-weather disasters. Investors have stepped in to fund emerging efforts around cleantech, a term used broadly to describe technology seeking to manage human impact on the environment. While hopeful, the technology can take years to prove and even longer to convince traditional utilities and government agencies to adopt. “That’s a big bottleneck,” said Bilal Zuberi, a venture capitalist at Lux Capital who focuses on emerging tech investments. Zuberi said a recent uptick in funding and activity is encouraging, but he also cautioned that new companies have to find ways to effectively work with slow-moving potential customers.

But some startups are ambitiously looking to tackle wildfires head-on. Chooch AI, an artificial intelligence company based in San Francisco, is using a system that analyzes satellite images every 10 minutes to identify where new wildfires may have broken out. At the moment, firefighters largely rely on traditional methods to spot fires – typically people who call in after seeing smoke. That can lead to false alarms and fires that go unnoticed for too long, said Chooch CEO, Emrah Gultekin. Chooch’s technology is trained to spot likely signs of wildfires, and then send photo emails to people at firefighting agencies, who can then verify if a fire has broken out. Gultekin says they’re talking with the California Department of Forestry and Fire Prevention (Cal Fire), as it adapts its system to look for wildfires, although it’s early in the process. The company hopes to have the system live by next year’s wildfire season.

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*US figures based on data from the 2020 US Census and Canadian figures based on data from the LOCATION® database; figures are rounded to the nearest 100

Source: 2019 Verisk Wildfire Risk Analysis

### EVACUATIONS AND BLACKOUTS MADE 2019 UNIQUE

While 2019 wildfire activity in the US was not as active as 2018, disruption was still significant, leading to the evacuation of over 200,000 people and the declaration of a state of emergency in California. Last year, there were 49,786 wildfires burning over 4.6 million acres, compared with 55,911 wildfires, burning over 8.5 million acres in the same period in 2018.

One of the most notable aspects of the 2019 California wildfire season was the introduction of scheduled intentional power outages by utility companies when fire conditions were forecast. This was meant to minimize or eliminate ignition risk from downed powerlines. These preemptive power shutoffs occurred in approximately 30 counties in California for approximately 23 days total, by Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E). The shutoffs initially affected around 800,000 customers, or about 2 million people. Stanford University’s Michael Wara, an expert on electricity policy in California, estimated the total costs of the blackouts were somewhere between $1.8bn and $2.6bn.

The shutdowns drew widespread criticism from residents as well as government officials. Many businesses and residents complained of either being misinformed or not informed when shutdowns would occur. The state of California developed programs to protect utility companies and consumers in the advent of future wildfire events. The state legislature passed a bill which created a $2.3bn state-run insurance pool to act as a cushion for utility companies against future wildfire claims.

The 2019 bushfire season in Australia was very severe. High temperatures, dry air, and abundant flammable fuel due to low precipitation, led to a very early bushfire season. At year-end, the total reported cost of Australia’s wildfires, which straddled 2019/20, was roughly USD $900mn. The loss now exceeds USD $1bn based on current exchange rates.

### USING TECHNOLOGY TO OUTWIT WILDFIRES

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7 National Oceanic and Atmospheric Administration, Wildfires - Annual 2019, 2019
8 Vox, California’s deliberate blackouts were outrageous and harmful. They’re going to happen again, October 14, 2019
9 Aon Annual Report, Weather, Climate & Catastrophe Insight, 2019
Descartes Labs, a spin-off of Los Alamos National Lab, uses artificial intelligence (AI) to detect wildfires. Their wildfire detector, launched in 2019, can correctly spot a wildfire in nine minutes. The wildfire detector uses images from two Geostationary Operational Environmental Satellites, GOES-16 and GOES-17, launched by the National Oceanic and Atmospheric Administration (NOAA). These satellites provide a stream of high-resolution and infrared imagery every five minutes. A variety of AI algorithms ensures the tool filters out false alarms, such as flares from oil and gas industries, controlled agricultural burning, or large fireworks displays. The algorithms take into account where refineries are, locations of steel and copper mills, the overall terrain, and more.

For example, when the tool spots a wildfire in California, Descartes Labs immediately broadcasts an alert to the LA Times who, in turn, reports it on their wildfire map. The detector can provide the exact latitude and longitude of the fire. In October 2019, Descartes detected the Kincade Fire in Sonoma County, CA, prompting the LA Times to release the first public notice about it. 10

WHERE HUMANS FEAR TO TREAD – THE POWER OF DRONES

Drones have been useful to firefighters for years. But as the technology develops, drones are getting smaller and more powerful. They also have better payload options and can go where humans cannot. An aerial view provides a quick assessment of the situation and allows fire crews to see through smoke and identify hotspots. Here are some ways firefighting drones help:

- **Scene Monitoring**
  - Rapid 360° assessment of burning structures
  - Floodlight illumination of nighttime operations

- **Wildland Firefighting**
  - Visualize current fire conditions and respond immediately to change
  - Reduce ground crew risk with enhanced monitoring
  - Live stream reliable data to command centers

- **Search & Rescue**
  - Survey large areas of inaccessible terrain
  - Payload drop systems deliver items to victims and crew
  - Locate individuals at night with thermal imaging cameras and floodlights

- **Post-Fire or Disaster Assessment Survey**
  - Map the scene to assess damage
  - Search for and locate missing people after a natural disaster
  - Use footage for future training purposes

PREVENTING WILDFIRES SPARKED BY POWERLINES

California utilities are experimenting with a new technology that proponents say could help prevent both electricity shutoffs and equipment failure related wildfires. The technology comes as the Pacific Gas & Electric (PG&E) faced intense criticism over its Public Safety Power Shutoff program, which led to hundreds of thousands of Californians being left without power, often for days at a time, in an effort to prevent failing equipment from starting wildfires.

Distribution fault anticipation (DFA), is a technology using predictive algorithms to assess electric systems and identify potential equipment failures. B. Don Russell, a Texas A&M University professor, helped develop the technology as part of the Power Systems Automation Laboratory. “It will be a paradigm shift for the way utilities operate,” said Russell. Currently, electric companies “just kind of have to wait until something breaks and then go fix it,” Russell said. “DFA gives you real-time situational awareness of the circuit. It allows you to know when things start to degrade.” The original purpose of the technology was to prevent costly power outages and prevent accidental electrocution from downed powerlines. “It just turns out that the things that cause outages in the system are also things that start wildfires,” Russell said. PG&E began testing the technology in 2019, as part of a larger project. “The technology is being evaluated along with other sensor technologies as a way to detect emerging conditions on the electric grid and improve situational awareness,” said PG&E spokesman Paul Doherty. “The evaluation phase is scheduled to be completed by July 2020.” 11

10 Business Insider, A look at how Descartes Labs is leveraging AI to alert fire managers of wildfires and decrease the damage on homes and habitats across the US, December 19, 2019
11 The Sacramento Bee, California Utility Creates New Tech to Stop Wildfires, November 27, 2019
LEADING THE WAY IN SUSTAINABILITY

Global heating is increasing the likelihood and intensity of wildfires, which could have a growing impact on the achievement of the Sustainable Development Goals. The Sustainable Development Goals are a universal call to action by the United Nations to achieve a better and more sustainable future for all. In September 2019, world leaders at the SDG Summit called for a decade of action and delivery for sustainable development, and pledged to mobilize financing, enhance national implementation and strengthen institutions to achieve the Goals by the target date of 2030.

Sustainable development is a crucial element of Allianz’s daily business. We promote and monitor products and services that create social value or support sustainable development. We created a category of insurance and assistance services called Sustainable Solutions to improve lives, make a positive environmental impact, and address weather-related concerns. Allianz integrated ESG (environmental, social and governance) criteria into both insurance and investment businesses several years ago. As a result, Allianz is recognized as the most sustainable insurer worldwide, according to the Dow Jones Sustainability Index (DJSI). We have the business model and market presence to protect our clients from severe weather risks, while contributing to a climate-friendly economy and a fair society.

THE IMPACT OF INSIGHT

Allianz Risk Consulting (ARC) experts from Allianz Global Corporate & Specialty (AGCS) review each wildfire experience to drive strategies and insights for our clients going forward. Recent wildfire seasons have revealed power grid weaknesses, and further illustrated that we must ensure everyone is informed and prepared if massive power shutoffs are used as a wildfire prevention strategy. AGCS has developed solutions and suggestions that clients can implement now to protect their assets. We understand our unique role in mitigating and adapting to climate volatility, as both providers of risk protection and as major investors managing $30trn of assets. In line with our primary functions, we continue to work with customers, industry and governments to

- Provide protection against the impact of physical perils
- Provide risk management advice, and support mitigation, resilience and adaptation solutions
- Maintain insurability, sustaining the real economy by planning ahead with governments, industry and society
- Remain resilient, to continue supporting our customers
- Provide long-term investment, including existing efforts to support greener technologies and transition activities
- Support understanding of the financial and strategic risks of climate change through research and disclosure

Allianz actively offers custom policies to help business manage weather extremes including temperature rise and wind surges. “We’re working to understand client concerns and develop tailored solutions,” said Karsten Berlage, Managing Director of Alternative Risk Transfer at AGCS.

Berlage sees increasing applicability of parametric insurance in a warming world. Parametric insurance is an innovative coverage triggered by an index and is an increasingly attractive enhancement to some traditional insurance policies. To develop a parametric solution, a policy is structured with certain events plainly stated in one component in a supply chain is affected by an index can be established in order for coverage to be triggered. For example, if one component in a supply chain is affected by weather, manufacturing processes can be delayed. Therefore, an index can be established representing a minimal basis risk relative to actual business performance. “In terms of loss solutions,” Berlage says, “parametric has the advantage,” due to transparency and the speed of payouts.

Berlage further states that customers don’t need to choose between indemnity and parametric custom solutions, as the two easily can be combined for full coverage.

A WARMING CLIMATE OF WILDFIRES

Although the exact quantities are difficult to calculate, scientists estimate that wildfires emit about 8bn tons of CO2 per year into the atmosphere for the past 20 years. These emissions account for approximately 5-10% of annual global CO2 emissions each year, according to the International Energy Agency. These calculations don’t include all wildfire emissions as net emissions, because some of the CO2 is offset by renewed forest growth in the burned areas.

However, extreme fires can release huge amounts of CO2 in a very short time. California fire experts estimate that the blazes that devastated Northern California’s wine country in October 2017 emitted as much CO2 in one week as all of California’s cars and trucks did over the course of a year.

Source: Inside Climate News, How Wildfires Can Affect Climate Change (and Vice Versa)
BEST RISK MANAGEMENT AND CLAIMS PRACTICES

An insurance claim is the defining moment of service—the moment when a promise is delivered. At AGCS, we deliver superior wildfire claims service to our customers, before, during and after a loss. A coordinated approach to claims management is the key to prompt and direct action. Immediate and efficient claims services and handling is how we help our clients remain resilient and resume operations. Our dedicated and respected team of experts lead clients to better prepare and are also there to provide prompt evaluation and resolution of losses as they occur.

One novel application of fire protection that is ready and in use today, is an environmentally safe biodegradable fire-fighting foam used for pretreatment and suppression around property and building perimeters. When fire is imminent, foam is applied from private fire trucks appointed with state-of-the-art equipment. AGCS supported businesses concentrated near the Mendocino Complex and Woosley Fires in 2018 and decided conditions within these areas warranted protective solutions against exposure. AGCS worked with Consumer Fire Products, Inc. (CFPI), an expertly trained brigade of fire professionals dedicated to wildfire property protection; to evaluate exposed locations, assess fire threat and prioritize deployment of resources.

“I suffered a total loss to my dwelling. Advance payments were promptly issued, and we reached a creative solution for additional living expenses. The contents claim was fully evaluated within 12 days of our submitting the list of contents, and we will have fully resolved the dwelling within 6 months of the loss. I could never have imagined that any insurance company would be as compassionate, honorable, prompt and easy to work with as AGCS. From my experience I can attest that they live up to their ‘no surprise’ culture by working to deal with claims in a fair, fast and effective manner.”

Mark Kramer
Managing Director, FSG and Senior Lecturer, Harvard Business School

The brigades coordinate closely with local incident command centers and operate within active fire zones, as requested by insurers and other interested parties. Eight AGCS clients with significant exposure, and in close proximity to the forecast fire path, were identified. CFPI patrolled the locations and took precautionary measures such as clearing brush, relocating flammable materials away from combustible construction, and spraying buildings/foliage with biodegradable fire-fighting foam as warranted.

“We are pleased to support communities struggling to mitigate extreme catastrophes like wildfires,” says Scott Steinmetz, Regional Head of MidCorp ARC, AGCS. He explains that innovative approaches and services such as CFPI’s represent a part of the new frontier in predictive and proactive mitigation responses and that the insurance industry should be at the center of the dialogue as such capabilities emerge.

One of the key principles of claims management is to keep all parties informed throughout the process. This includes:

- Make immediate phone contact
- Discuss coverage thoroughly and provide opportunity for additional questions as they occur
- Discuss how the claim process works in detail
- Provide all means of contact information and be accessible
- Advise who else may be assisting to investigate/evaluate their claim (Fire investigators, building consultants, contents specialists, forensic accountants, etc.)
- Discuss immediate needs/concerns and agree on plan to address
- Discuss next steps and action plan
- Develop potential loss exposure
- Obtain financial information/documentation
- Develop scope of work for building and contents
- Arrange to meet as soon as accessible and safe
- If access to the area (or risk location) will not be possible for an extended period of time, consider opportunities to meet at alternative location(s)
- Arrange to meet as soon as accessible and safe
- Review coverage and loss adjustment process again in detail
- Develop scope of work for building and contents
- Obtain financial information/documentation
- Develop potential loss exposure
- Discuss next steps and action plan

OUR CLAIMS PROFESSIONALS FOLLOW THESE BEST PRACTICES

**Initial Contact:**
- Make immediate phone contact
- Discuss coverage thoroughly and provide opportunity for additional questions as they occur
- Discuss how the claim process works in detail
- Provide all means of contact information and be accessible
- Advise who else may be assisting to investigate/evaluate their claim (Fire investigators, building consultants, contents specialists, forensic accountants, etc.)
- Discuss immediate needs/concerns and agree on plan to address

**Initial Inspection/Meeting:**
- If access to the area (or risk location) will not be possible for an extended period of time, consider opportunities to meet at alternative location(s)
- Arrange to meet as soon as accessible and safe
- Review coverage and loss adjustment process again in detail
- Develop scope of work for building and contents
- Obtain financial information/documentation
- Develop potential loss exposure
- Discuss next steps and action plan

**Continued Handling:**
- Frequent follow up
- Be accessible
- Manage expectations and do what you say you will do in the time agreed upon
- Manage consultants and their deliverables
- Be proactive, not reactive to needs; for example, stay current on business interruption advance payments to eliminate cash flow worries
- Issue undisputed amounts of loss quickly
- Maintain a good working relationship
- Keep all parties informed throughout the process

ALLIANZ CATASTROPHE COORDINATION TEAM

When a CAT occurs, the Allianz Catastrophe Coordination Team is immediately engaged. The CAT team monitors changes daily, invokes identification of the CAT to ensure all claims are routed and handled with utmost priority. A communication process is immediately put in place that identifies all of our brokers/clients in fire areas. The team then works closely with clients at the onset of a fire to make sure they take needed steps to prepare. Since many insureds may not have their policy readily available at a time such as this, the team maintains communication during and after the event to assist with the claim reporting process.

**ALLIANZ ASSISTS BUSHFIRE VICTIMS**

In 2019, Allianz, in partnership with the Australian Red Cross, established an employee Bushfire Appeal, where every dollar donated by its staff was matched by Allianz to help provide psychological first aid and assist evacuees contacting families and friends. The initiative raised a total of more than $100,000 for the Red Cross Disaster Relief & Recovery Fund, after Allianz matched more than $50,000 dollars donated by staff. Allianz deployed additional resources, including dedicated priority phone lines, on-the-ground assessment and claims teams, temporary accommodation, and fast-tracked emergency payments. Allianz also helped to recover policy details lost in the fires and provided 24/7 claims support. 15

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15 Insurance Business Australia, Allianz ‘ready to respond’ to bushfire victims, January 8, 2020

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FUTURE FIRES: WEATHERING THE FIRE STORM

MODELLING

Wildfires are a rapidly growing challenge – and businesses need better tools to manage this risk. We know that predicting wildfire-related risk requires understanding more than just fire history, frequency and severity. We utilize solutions that are scientifically supported and peer-reviewed to provide powerful insights into wildfire mitigation, monitoring, reporting and response.

We approach wildfire modeling from a loss-prevention perspective:

- Fire frequency, history and severity: Quantifies prevention perspective:
  - Increase in property development in and adjacent to Wildland Urban Interface (WUI) areas
  - Increase in fuel loads on the ground, including dead standing trees due to drought and insect infestation, along with a decrease in fuel moisture content as a result of prolonged and conditions
  - Increase in weather volatility from year to year, including several years of drought interspersed with a few very wet winters, as well as longer dry seasons extending later in the year when intense seasonal wind patterns are most likely to spread fires
  - Changes in fire behavior, with rapid expansion becoming more explosive in terms of quickness and distance, due to a confluence of extreme conditions including high temperatures, low humidity, strong winds, high fuel loads (vegetation and structures), and steep, hilly terrain; fires have consumed up to 70,000 acres a day and traveled over 15 miles in a few hours, with embers blown across multilane highways into developed areas within city limits
  - Multiple fires have erupted at the same time and often in close proximity, stretching the availability of fire-fighting resources and their capability for aerial drops of retardants due to massive smoke plumes which reduce visibility

Reinsurance and risk modeling experts have begun using terms such as “megafires” and “the new abnormal” as they have identified several contributing trends of interest:

- Changes in fire behavior, with rapid expansion becoming more explosive in terms of quickness and distance, due to a confluence of extreme conditions including high temperatures, low humidity, strong winds, high fuel loads (vegetation and structures), and steep, hilly terrain; fires have consumed up to 70,000 acres a day and traveled over 15 miles in a few hours, with embers blown across multilane highways into developed areas within city limits
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SEVEN STEPS TO PREPARE FOR A WILDFIRE

1. Create defensible space

Defensible space is both horizontal and vertical (low lying brush to bushes to low lying tree canopies to large tree canopies). The key is to disrupt continuity in the vertical dimension. Your property should be divided into three zones around your building:

- **Zone 1**: 0 to 5 feet from the exterior wall of your building. This zone is closest to your facility, so it requires the most careful selection and intensive management of plants and materials:
  - Install hard surfaces in this zone, such as a concrete walkway, or use noncombustible mulch products, such as rock mulch.
  - Regularly water lawns and plantings to prevent dry vegetation.
  - Remove dead plant material from plants.
  - Remove plants adjacent to combustible siding and foundation vents, as well as plants under or next to windows, under-eave vents or interior corners.

- **Zone 2**: 5 to 30 feet from your building, or to the property line. Maintaining plants in this zone will help prevent fire from climbing (laddering) into the top portion of trees or shrubs and burning directly to your facility:
  - Maintain trees and shrubs in well-spaced groupings.
  - Remove dead plant material and lower tree branches.
  - Maintain trees by keeping a minimum horizontal spacing of 10 feet between trees, as well as plants under or next to windows, under-eave vents or interior corners.

- **Zone 3**: 30 to 100 feet from your building, or to the property line. Maintaining plants in this zone will help reduce the energy of wildfire, slowing its advance to your building. Tree and brush spacing should force any fire in the tops of the trees, brush, or shrubs to drop to the ground:
  - Remove dead plant material and tree branches from vegetation on a regular maintenance schedule.
  - Create islands or groupings of vegetation.
  - Remove lower tree branches.
  - Maintain trees with a minimum horizontal spacing of 10 feet between crown edges.

2. Reduce organic fuel

Create a Vegetation Maintenance Plan (VMP) to reduce ignition sources. If using plants around the building, select ones with low combustibility characteristics such as high moisture content, low oil or resin content, deep roots with thick heavy leaves, and minimal production of dead vegetation. When developing a VMP, consult a landscape professional such as a forester, range manager, or natural resource specialist.

3. Use noncombustible materials for building signage

Avoid materials such as wood, plastic and vinyl as they will act as fuel to further the spread of fire.

4. Consider the exterior walls

Select exterior wall cladding made of noncombustible siding materials such as concrete and brick. Ensure the start of siding is a minimum of 6 inches above the ground.

5. Consider the windows

Select windows that are dual-pane with tempered glass. For operational windows, install screens to cover sections that can open. Windows should be closed when wildfire threatens.

6. Cover the roof with noncombustible material

Select roof covers with a Class A fire rating based on testing to ASTM E108 or UL 790. Class A fire rating means that the building material is highly resistant to fire and does not spread flames quickly. Select gutters and downspouts made of noncombustible materials such as aluminum.

7. Inspect vents and clear fuel from roofs

Install a minimum of 1/16” and maximum of 1/8” noncombustible mesh screening over all vents to prohibit wind-blown embers from entering your building. 1/2” mesh is ineffective. (California Building Code, Chapter 7A). Regularly remove debris from roof and gutters, since it can easily be ignited by wind-blown embers.
COVID-19: UNPRECEDENTED CHALLENGES FOR FIREFIGHTERS

For firefighters — already engaged in one of the world’s riskiest occupations — the 2020 fire season presents new challenges related to COVID-19. The pandemic has raised the stakes at the worst possible time, forest managers say, and is forcing firefighters, officials, and communities to rethink how they combat blazes. One such consideration is firefighters moving from blaze to blaze in camping groups while not on the front lines. This previous practice is now considered a dangerous incubator for COVID-19. Also, the combination of smoke inhalation and the novel coronavirus complications greatly expand respiratory risks for first responders.

Almost every aspect of preparing for and fighting wildfires will have to change. Several states are:

– turn firefighter training sessions and emergency shelters into no-contact zones
– scale back preventative controlled burns
– plan for larger firefighting campsites near wildfires and additional trailers to accommodate showers and other hygiene needs
– scrap catering tents for firefighters in favor of military-issue MREs, or “Meals Ready to Eat” to reduce contact with serving utensils
– limit fire engines to a driver and one passenger, requiring other crew members to ride in additional vehicles
– offer paid sick leave to encourage crew members to take sick leave when needed
– prepare water-dropping helicopters to deploy day and night throughout the summer
– inspect wildfire-vulnerable homes to ensure fire defensible space is available

The continued spread of the coronavirus, as well as the economic paralysis that has accompanied health restrictions, has impacted every aspect of wildland firefighting. With fires beginning earlier in the spring and persisting later into the fall, communities may have to contend with the dual risk of COVID-19 and wildfire for several months.

“Speaking across the board, this is a game changer with COVID-19,” said Mike Mohler, spokesman for the California Department of Forestry and Fire Protection. “It’s going to have to be an ‘everybody’s hands on deck’ approach to this.” Mohler said his biggest concern is firefighters contracting COVID-19 and silently spreading it among fellow firefighters, knocking them out of service, or even spreading it among the public. 16 Already, the coronavirus has reduced the number of overall firefighters available in California.

Adding to these concerns, the National Oceanic and Atmospheric Association’s most recent three-month drought outlook has drought conditions across large swaths of California, Oregon, Nevada, Utah, Arizona, New Mexico, and Colorado persisting to the end of June. 17 Scott McLean, a spokesman for the California Department of Forestry and Fire Protection, said the agency is following strict physical distancing protocols, but there is no agency-wide guidance beyond the recommendations every American has already been given for the pandemic. 18

Looking Forward

AGCS is increasingly making use of modern technology to better aid risk assessment and response when it comes to weather-related events — forest fires, hurricanes, tornados or earthquakes. We have the people, insight, and tools to manage risks and opportunities. We continue to protect our customers, develop our people and engage in the community.

And as the world copes with COVID-19, we are adapting daily, keeping our clients and business partners fully informed as we respond to latest developments. Our priorities are clear: to do our utmost to secure the wellbeing of our colleagues, clients and business partners by responding to the outbreak through appropriate precautions, while we continue to run our business and serve our clients.

For more information on our coronavirus response, please visit our website.

Source: North American Seasonal Fire Assessment and Outlook, Outlook Period June, July, and August 2020