

Fireline



Yukon Wildland Fire Management
2024 fire season in review





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Fireline is the Government of Yukon's Wildland Fire Management Branch annual magazine.

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Follow Wildland Fire on social media through Yukon Protective Services and online at Yukon.ca/Wildfires.

Cover

Dawson fire lookout Markus Lenzin gazes out from his tower's cupola.

Photo by Trina Moyles

Opposite

A firefighter from the Yukon First Nation Wildfire unit crew patrols MA-021 on July 1, 2024.

Photo by Haley Ritchie

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Minister's message

Canada experienced another significant wildfire season in 2024. Yukon firefighters and support personnel worked hard this year in response to emergencies at home as well as in western North America.

Thank you to the entire Wildland Fire Management branch, and to our partner First Nation fire crews, for protecting lives, communities, and infrastructure this summer. Yukoners recognize your dedication and efforts. We are thankful for the support of community leaders, First Nations governments and other response partners, like the Emergency Measures Organization, the Fire Marshal's Office, volunteer fire departments, and other government agencies and private sector partners.

The Yukon government continues preparing for more intense fire seasons by investing in people, equipment, and hazard reduction. By working with First Nations governments, municipalities, and partners across civil society, we are creating more wildfire-resilient communities together.

Richard Mostyn
Minister of Community Services



Director's message

It's time to look back on another fire season in the Yukon.

While the season began with wildland fire support for flood risk in Old Crow, our season quickly shifted to wildfire operations. Swift responses to significant numbers of new lightning-caused fires limited serious impacts in all districts, especially through central Yukon, while other fires required longer-term responses due to their impacts to communities and infrastructure.

We're continuing to prioritize prevention and the development of fire resilient communities through community protection planning and prevention work. Notably, the Whitehorse South Fuel Break has begun attracting both national and international interest as an important public safety infrastructure asset.

This is the fifth annual Fireline magazine. Fireline gets better every year. This year, in addition to reporting on our expenditures, we get to look at the year in wildfire, from stats to stories. It highlights the dedication and innovation that our team brings to their work, during fire season and beyond.

A heartfelt thank you to every member of the WFM team.

Keep up the great work.

Devin Bailey
Director, Wildland Fire Management

Fire season in review

What happened in 2024?

Wildland Fire's seasonal preparations started off on a high note with four new crews on staff and cross training planned with multiple partners. When April came around, the season started wet. Personnel were quickly retasked to flood response operations in Old Crow, which was on evacuation alert during spring breakup, and the Klondike Valley.

By early June, fire danger was finally in line with seasonal norms. For the third year in a row, sustained lightning storms found hot and dry conditions in central Yukon that challenged our initial attack program and triggered several notable fires. This two-week lightning storm started 98 new fires, or 65 per cent of the season's overall wildfires.

This intense burst of new wildfires caused evacuation alerts for Stewart Crossing and Mayo. By June 20, the North Klondike Highway was impacted by wildfire activity for the second year in a row. Sadly, this resulted in the Yukon River Quest ending its annual race early in Carmacks. Nearby, the response to a catastrophic heap leach failure at the Victoria Gold mine was complicated by wildfires near the access road.

Despite some fires that quickly grew out of control, swift responses by initial attack prevented several potentially dangerous wildfires from threatening communities. Of the 98 lightning-caused fires that started between June 19 to July 3, 30 required a full response. By July 3, 16 of these fires had already been put out thanks to experienced duty officers and hardworking crews.

One final, hot weekend in late August resulted in an emergency evacuation of a remote lodge in the Beaver Creek region. Fortunately, no one was hurt.

Where did Yukon firefighters work?

Wildland Fire Management staff worked 32,600 person-days this summer doing all the jobs needed to keep communities safe. We spent 4,877 days working on Yukon firelines and 5,871 days on out-of-territory firelines.

Both spring and fall lulls in the fire season brought new opportunities to work together with other agencies, at home and away. Yukon crews and officers, including the Yukon First Nations Wildfire unit crews, travelled widely this year to help neighbours in British Columbia, Alberta, Saskatchewan, Oregon, Washington, the Northwest Territories and Parks Canada.

Prescribed burns

Prescribed burning continues to play an important role in our efforts to reduce wildfire risk. This year, Wildland Fire Management completed 71 hectares of prescribed burning at 11 sites in Carmacks, Mayo, Watson Lake and Whitehorse – including in the Whitehorse South Fuel Break.

Two other projects were not completed due to unfavourable conditions. With assistance from an Oregon ignition trainee and BC Wildfire personnel, two sections of forest adjacent to Stewart Crossing were prepared for a prescribed burn in response to the Wrong Lake fire (MA-006). Wildland Fire Management staff also supported a joint Parks Canada/Champagne and Aishihik First Nations burn in Kluane National Park. That planned 37-hectare burn was the first time burning took place in the park's boundary since the Kluane Game Sanctuary was established in 1943.

While it's unfortunate that conditions did not cooperate for these projects, the plans remain in place and important public education work was done to help Yukoners understand why we do prescribed burns. 🌱

Notable fires

Wrong Lake fire (MA-006)

Cause: Lightning
Report date: 19/06/2024
Response zone: Full
Size: 16,918 hectares

The Wrong Lake fire was started by a lightning strike in mid-June. Airtankers and initial attack crews had the fire held on its first night, but difficult conditions and a high response volume resulted in the fire escaping and merging with the nearby Willow Creek fire (MA-005). At times fire beside the highway and thick smoke resulted in road closures. Pilot cars helped get traffic through the area while the community of Stewart Crossing braced for a possible evacuation. The fire was held south of Crooked Creek thanks to hard work from a large response, including imported BC Wildfire personnel. Backup from rain resulted in a status change to being held on July 7.

Photo by Mike Smith



Roaring Fork fire (MA-021)

Cause: Lightning
Report date: 29/06/2024
Response zone: Full
Size: 668 hectares

This aggressive wildfire in the Mayo area started from lightning and grew fast – outpacing airtanker control efforts and challenging ground crews. The fire was visible from the Silver Trail and Mayo, and resulted in an evacuation alert for communities along the highway. While Mayo braced for a second year of evacuations, it fortunately wasn't necessary. Ignition operations successfully held the fire to the Minto Lake Road as heavy equipment operators and a unit crew made sure the fire wouldn't spread past it.

Photo by Randy Mitton



Haldane Lakes fire (MA-012)

Cause: Lightning
Report date: 26/06/2024
Response zone: Strategic
Size: 5,405 hectares

The Haldane Lakes fire (MA-012) and the nearby Shanghai Creek fire (MA-014) in the Dublin Gulch area could not have started at a worse time. Traffic to the nearby Victoria Gold mine was critical following a heap leach failure, but the fires impacted power lines and temporarily closed the South McQuesten access road. Crews and heavy equipment worked hard to keep access open and contain the damage.



Photo by Linda Brandvold

Mount Lewis fire (XY-008)

Cause: Lightning
Report date: 19/06/2024
Response zone: Wilderness
Size: 2,946 hectares

Located in the wilderness zone but sometimes visible from Whitehorse, the Mount Lewis fire burned all summer on a mountainside north of Lake Laberge, sometimes creating a dramatic show for paddlers and boaters. It provided a vivid backdrop to the first leg of the Yukon River Quest. Organizers eventually made the difficult decision to end the race early in Carmacks due to wildfire impacts on the North Klondike Highway.

Photo by Joey Powell





Photo by Alex Klubi

Snag Lake fire (BC-001)

Cause: Lightning
Report date: 06/06/2024
Response zone: Wilderness
Size: 49,852 hectares

The Snag Lake fire started early in the season but remained west of Wellesley Lake for most of the summer. Outside of occasional smoke, the cabins and hunting lodge on the lake were unaffected. Structure protection was set up early as a precaution. In late August, an unexpectedly hot weekend changed the plan. With the fire moving west fast, nine people were evacuated by air. Fortunately, no one was hurt and the main lodge was unaffected.



Moosehide Creek (DA-024)

Cause: Lightning
Report date: 26/06/2024
Response zone: Full
Size: 18 hectares

First spotted by the Dawson lookout tower, the Moosehide Creek fire was located nine kilometres northeast of Dawson. With hot and dry weather in the forecast, this fire could have easily become a serious threat. Airtankers responded quickly, followed by helicopter bucketing and two weeks of hard work by ground crews to contain and extinguish the fire. The fire was declared out on July 14.

Fire season in review

By the numbers



Fires by zone

The Yukon is divided into five fire management zones that, along with a wildfire analysis, guide fire suppression decisions: critical, full, strategic, transitional and wilderness. Typically, the closer a fire is to the critical zone, the higher priority it is. On the other hand, whenever possible, fires in the wilderness zone are allowed to fulfill their natural role in the boreal forest.

Response zone	Area burned (hectares)*	% of total burned area
Critical	72.4	0
Full	17,625.8	9
Strategic	7,681.0	4
Transitional	4,788.1	2
Wilderness	175,604.7	85
Total	206,201.2	



Fires by district and area

This year, a total of 150 fires burned in the Yukon's 10 fire districts. The total area burned was an estimated 206,201.2 hectares. Dawson had the most fires. The district with the most area burned was Beaver Creek.

Region	District	# of fires	% of total burned area	Area burned (hectares)
Klondike	Dawson	44	16	32,215.5
	Old Crow	4	5	9730.5
Kluane	Beaver Creek	7	30	61,600.3
	Haines Junction	4	0	1.2
Southern Lakes	Teslin	4	14	27,906.2
	Whitehorse	14	8	16,947.2
Northern Tutchone	Mayo	33	18	38,087.9
Tatchun	Carmacks	19	6	12,443.1
	Ross River	9	3	6375.8
Tintina	Watson Lake	13	0.4	895.5
Yukon		150	100	206,201.2



2023-24 budget forecast

As of January 2025, the final costs for the season are still being finalized, but this is about how much Wildland Fire Management has spent since April 1, 2024.

Prevention and mitigation: \$1,460,059

These are the costs associated with reducing community wildfire risk. Prevention and mitigation spending includes the FireSmart program, large-scale risk reduction projects like fuel breaks, and community wildfire protection plan work.

Preparedness: \$21,224,636

Day-to-day operational costs like employee salaries and air attack contracts are funded by this amount.

Direct fire costs: \$22,379,818

This is how much money Wildland Fire Management actually spent managing wildfires.



Structural firefighters team up with wildland firefighters on a cross-training for urban interface fires on June 3, 2024.

Photo by Haley Ritchie



One giant leap for wildfire detection

Canadian WildFireSat plans to launch in 2029

For 25 years, MODIS satellites have circled the globe and dutifully recorded infrared data, used by wildfire managers across North America for early detection of possible wildfires.

But after a quarter of a century the MODIS satellites will reach the end of their lifespan this year. As they run out of fuel and begin drifting in orbit, northern wildfire managers will lose one of their “eyes in the sky” over remote areas.

Routine satellite wildfire detection began in 1999, when NASA launched the Terra research satellite as the first of three missions designed to monitor changes on planet Earth. Terra blasted the first heat-sensing Moderate Resolution Imaging Spectroradiometer (MODIS) into orbit, which was followed into space in 2002 by another MODIS on the Aqua satellite. In 2011 the Visible Infrared Imaging Radiometer Suite (VIIRS) entered orbit aboard the Suomi NPP satellite, followed by NOAA-20 and NOAA-21 also carrying VIIRS. VIIRS will replace the gap caused by Aqua’s MODIS.

The Yukon’s extensive wilderness management zone means that remote detection is an efficient way to flag potential new fires alongside other tools like tower observers, public reports and aircraft patrols.

This year, when MODIS retires, Wildland Fire Management will continue to use VIIRS. Unfortunately, overpass times are in the middle of the night, and very early afternoon – missing the peak burning period.

Enter WildFireSat: Canada’s satellite mission and the world’s first-ever public purpose-built wildfire mission.

Developed by the Canadian Space Agency, Natural Resources Canada and Environment and Climate Change Canada, WildFireSat will provide more accurate air quality and smoke information to guide public decision-making about wildfire impacts.



Above

Alberta wildfires photographed from the International Space Station by Canadian astronaut David St-Jacques.

Photo by Canadian Space Agency/NASA

Below

Payload technicians prepare the Aqua satellite, which carries a MODIS sensor, for launch at Vandenberg Air Force Base.

Photo by NASA

The Canadian Space Agency plans to launch WildFireSat in 2029. Yukon is taking part in the WildFireSat development committee along with partner agencies from across Canada.

“Satellites are the only way you can see all of Canada and WildFireSat will be positioned to provide reliable data at the times when fire managers are making important decisions,” says WildFireSat mission leadership team member Colin McFayden, who works for Natural Resources Canada.

WildFireSat will complement the VIIRS data that wildfire officials are already using. As a mission tailored to Canadian fire needs, WildFireSat’s orbit will be better synchronized with the country’s peak burning periods. Using emerging technology that reduces sensor energy needs, the satellite is also more affordable – meaning more could be launched as part of future satellite missions that would provide even more timely data.

In keeping with the Government of Canada’s Open Data Policy, the mission’s data will also be available to the public. “WildFireSat won’t solve all the information needs for fire managers,” says McFayden. “But it will provide an unprecedented level of reliable information informed by and tailored for fire managers.” 🌱





Wildfire art

Spark, 2023. Kaylyn Baker, Selkirk First Nation

“Moonstone, howlite, faceted Australian opal, Klondike nuggets encased in a glass bead, porcupine quills, obsidian, bugle beads, emeralds, snowflake obsidian, silver beads, embroidery, and caribou hair tufting.

This piece is meant to spark the conversation of climate change and how it's impacting forest fires in the Yukon and the North. It highlights the fire, the smoke, the burn and in time the aftergrowth of morel mushrooms and fireweed.” 🍄

Yukon Arts Centre Permanent Art Collection.



A firefighter uses a drip torch to burn off mulched fuels during a prescribed burn on the Whitehorse South Fuel Break on Aug. 12, 2024.
Photos by Haley Ritchie



WFM talks to *The Current*

How communities are becoming more fire resilient

In August fuels management technician Milan Lapres went national – he spoke to CBC’s Juanita Taylor for *The Current* about the Whitehorse South Fuel Break project. The transcript below has been edited for length.

JT: There are currently more than 500 active wildfires burning in western Canada. As wildfire extremes become more prevalent each year, the concept of fire-proofing communities is growing in popularity. In the Yukon, authorities there have spent the last four years creating what’s called a fuel break, south of Whitehorse. Milan, good morning.

MILAN LAPRES: Good morning.

JT: So, what does a fuel break do exactly?

MILAN LAPRES: So, a fuel break is essentially a gap in vegetation or other combustible material, that can act as a barrier to slow or stop the spread of a wildfire in order to protect communities. So, what it does is it eliminates the potential for those big, scary crown fires where the canopy of the forest will burn off, and kind of forces the fire down to the surface, making it a little bit slower and easier to defend against. And it also creates a safe, defensible space for firefighters to work from.

JT: Okay, give us a visual. Paint us a picture. What does a fuel break look like?

MILAN LAPRES: So our fuel break includes a number of different components. So, it can include cleared land where all trees have been completely removed, or it can include thinning treatments where the space between each tree stem is increased so they’re further apart from one another. And it’s essentially a very large, in some cases two-kilometre-wide clearing or thinning treatment. And then it also includes areas where we’ve planted a bunch of aspen seedlings because they are much more fire resilient than conifers and don’t contribute to fire behaviour as much. So, it’s essentially a long, linear feature along the side of the community that includes clearing and thinning and oftentimes prescribed burning as well.

JT: So, this sounds massive. How do you build an effective fuel break?

MILAN LAPRES: So, there's a number of different strategies we use, and that can include mechanical treatments that are done with forestry equipment like feller bunchers or skidders. And it can also include hands-on treatments where people go in with chainsaws in areas that may be a little bit more sensitive or where we can't reach with the heavy equipment. And then we also utilize prescribed burning and tree planting and a number of other strategies to clear land.

JT: So, how vulnerable is Whitehorse to wildfires?

MILAN LAPRES: I think like many communities in the boreal forest, Whitehorse is quite vulnerable to wildfires. There hasn't been a major wildfire to the south of the community since the early 1900s, so there's been quite a build-up of fuels in that area. And generally, I think about 80 per cent of the times, the winds come out of that direction. So, there's a lot of fuel through that valley and the wind is pushing it right towards Whitehorse.

JT: So Milan, how important is the community involvement and buy-in in all of this?

MILAN LAPRES: It's incredibly important. I think it's really important to recognize that the fuel break is not the be-all and end-all of wildfire suppression. And it's very important for people to take steps around their own homes to increase fire resiliency, and also to educate their neighbours and everyone around them about the risk that is posed by wildfires.

JT: So, elaborate a little bit more on that. How do you want homeowners, community members, how do you want them to take part in being more fire smart?

MILAN LAPRES: Well, there's a number of FireSmart principles that people can adopt around their home. The best place to get information about that is the FireSmart Canada website. And they provide information about all the different steps that can be taken, including clearing all combustible debris within a metre and a half of the home, ensuring that your gutters are cleared of any combustible debris, and a number of

different steps that people can take to increase the wildfire resiliency of their home.

JT: Milan, thank you for telling us about this today, and good luck with the remaining summer and the fire season in the Yukon. 🍁

Opposite page

Prevention and Mitigation manager Luc Bibeau describes to community leaders from across the Global North how aspen reforestation is used to make Whitehorse more resilient to wildfires.

Photos by Mike Fancie

This year, Wildland Fire Management's prevention and mitigation program received extensive attention as the Whitehorse South Fuel Break attracted people hoping to learn more about this innovative approach to community safety. The fuel break was profiled on CBC's flagship evening news show *The National* and a delegation of municipal leaders from the Global North toured the site.

Whitehorse South Fuel Break quick facts

- The Whitehorse South Fuel Break is designed to create a safe, pre-planned line of defence for the city in case of a wildfire in the dense spruce forest south of town.
- The fuel break currently extends from Mary Lake to Mount Sima. Wildland Fire Management's long-term goal is to expand it west to the Alaska Highway, creating a 20-kilometre long, 800-hectare fuel break by 2032.
- Planners hope to convert about 75 per cent of the fuel break to aspen groves.
- By 2026, over 500,000 trees will have been planted in the fuel break as part of this stand conversion process.
- Prescribed fire is an important part of the stand conversion process because it removes debris from the ground that would make it harder for aspen shoots to grow.



Welcome to the fire family

Each spring new cadres of firefighters and crew leaders complete training during a week-long course outside of Whitehorse at Camp Boyle. The intense program covers wildfire behaviour, radio operations, firefighting equipment, physical fitness, orienteering, leadership skills and more. A huge amount of work goes into this course for both students and instructors.

This year recruits from the Yukon Government, First Nation partners and Yukon First Nations Wildfire were recognized at a graduation event on May 6.

During the ceremony, graduates were congratulated by officials that included Ta'an Kwäch'än Chief Ruth Massie, federal Minister of Emergency Preparedness Harjit Sajjan and Yukon Minister of Community Services Richard Mostyn. 🍷



Above

Firefighters in the Yukon are recruited by Yukon First Nations Wildfire, the Government of Yukon and First Nation partners.

Below


Ta'an Kwäch'än Chief Ruth Massie speaks to new recruits.

Photos by Haley Ritchie



Wildlife vs wildfire

What happens to animals after a forest fire?

A close-up photograph of a red squirrel perched on a tree trunk. The tree trunk has a prominent, jagged burn scar on the left side. The squirrel is looking towards the left of the frame. The background is a soft, out-of-focus light, suggesting a bright sky or a clearing.

A red squirrel perched on a tree outside the burn scar left by the Takhini Bridge fire in the Ibex Valley. Red squirrels rely on mature trees for food and generally don't use burned areas for a few decades after a fire.

Photo by Haley Ritchie



A woodpecker spotted through rows of burnt trees a year after the Takhini Bridge fire in the Ibex Valley.

Photo by Haley Ritchie

To our human eyes, scorched trees and blackened duff appear lifeless after a wildfire. But for some specially adapted animals and insects, a burn is full of potential.

“The boreal forest is a fire-driven ecosystem. All plants and animals here are adapted to some extent to cope with fire,” explains Yukon biologist Tom Jung.

A large wildfire radically alters a landscape. An intense crown fire can transform a dense spruce forest into open stands of blackened trees. But this charred landscape won’t remain black for long. Aspen and birch can quickly sprout from stumps. Pioneer plants like fireweed, dragonhead and purple reed grass are also quick to reclaim the nutrients left behind after a fire.

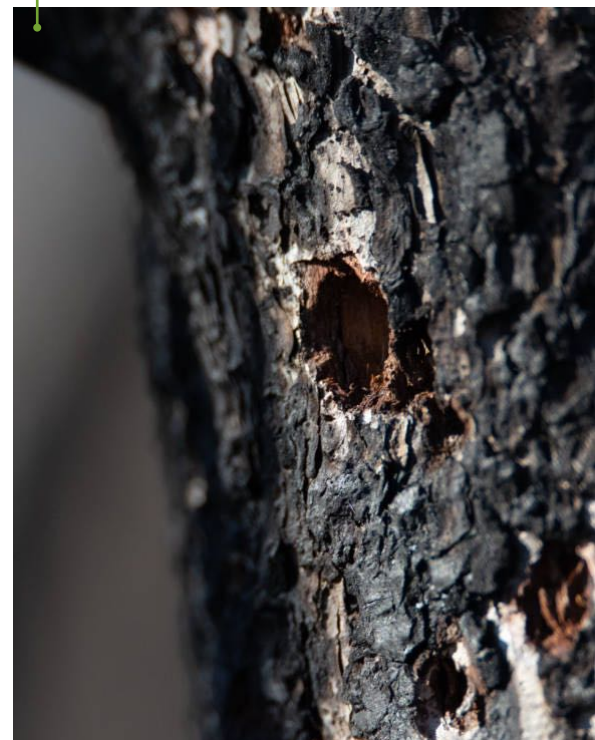
While it can take years for an area to fully recover from a wildfire, this new landscape can create both opportunities and challenges for animals that live in the forest.

“Some species rely on fire to create high quality habitat for them,” says Jung. “For instance, moose and snowshoe hare habitat is improved in the early years after a forest fire. Fire removes the canopy and opens up the forest floor and soil for an abundance of young deciduous shrubs and trees – the preferred food of hares and moose.”

“Fallen logs and trees killed in the fire create debris that make it more difficult for some predators, such as wolves and lynx, to locate and chase moose and hares, respectively,” he says.

Signs of a woodpecker’s activity in a burnt tree a year after the Takhini Bridge fire in the Ibex Valley.

Photo by Haley Ritchie





In general, animals like hares, moose, sheep, goats and bears all experience the benefits of vegetation renewal in the years immediately following burns.

“Food for these species increases in the first 30 or so years after fire,” says Jung. “Shoots of new green vegetation – particularly shrubs and forbs – grow from seed banks liberated after the forest floor and canopy are opened up.”

Smaller species can make themselves at home in the post-burn environment too. Many species of insects in the Yukon are well-adapted to live in burned habitats, where they feast and burrow in dead trees and logs.

Birds like black-backed woodpeckers are specially adapted to seek out these burrowing bugs in recently burned areas.

But not all animals benefit from fire. Jung says recent research in the Yukon concluded that “caribou strongly avoid recently burned areas, particularly during winter or severely burned areas.”

While some burned areas can maintain enough lichen to support small populations of caribou, the amount that survived was variable.



Animal tracks inside a burned area of the Ibex Valley. Morel pickers aren't the only creatures who frequent recently burned forests.

Photos by Haley Ritchie

Fish populations in the Yukon, particularly those in streams, are detrimentally impacted by wildfire. Wildfires leave behind a lot of ash and sediment. The run-off from these substances can muddy the waters and cover fish redds (nests).

“Additionally, the loss of tree cover on creek banks may reduce shade and increase water temperature and predation risk from birds such as ospreys and

bald eagles,” he explains. “Once the stream or creek clears of sediments, fish may return.”

During an active wildfire, most animals will migrate to new habitat to avoid harm, while others may bury themselves into the ground. During a wildfire situation, people may also come across wildlife resting near a wildfire, which means they are regaining energy after being displaced.

Despite the temptation to offer wildlife food or water during wildfires, it is important to leave attempts at rehabilitation up to the experts.

The Yukon Conservation Officer Services doesn't recommend approaching wildlife near a wildfire. If an animal is acting unnatural or appears injured, anyone can call the TIPP Line at 1-800-661-0525. 🐾



1st place winner
Allan Lee

Firefighters patrol the edge of a burn-off on the MA-06 fireline.

Photo contest winner

Wildland Fire Management's monthly photo contest encourages submissions from crewmembers, crew leaders and fire staff during the fire season. This year's overall first prize went to Allan Lee.

Submitting a photo in 2025? Send your best pictures during the season to YukonFireInfo@yukon.ca with the subject "Photo contest submission" and your name, position, description of photo and date it was taken. Winners will be entered to win monthly prizes and be credited in Fireline.



July
 Zach Nault
 Firefighters horsin' around
 near Swan Lake, BC.

Monthly winners



May
 Andrew Pike
 Photo of XY Bravo, Foxtrot and
 Golf on tour in Fort Nelson, BC.



June
 Jenna Green
 A helicopter flies on the
 edge of a smoke column
 during the July lightning
 bust in Mayo.



August
 Darin Arthur
 Greyhunter 2 guides a
 helicopter's water bucket
 to a hot spot on MA-04.

Keeping it 5x5

Behind the scenes with Wildland Fire's telecommunications team

Telecommunications officers Vern Marshall and Jeff Lister look over the data on a portable screen in a shop at Wildland Fire Management's headquarters. It may look like a Back to the Future prop, but Lister casually mentions that it's a \$35,000 service monitor used to troubleshoot problems and tune mountaintop radio relay stations called repeaters.

Standing over the monitor, Marshall explains that he and Lister work on "anything that has a power supply for testing."

During their safety orientation, fire crews learn how to drop gear and run during an emergency. However, the course takes pains to explain that communications tools like radios must be retained.

"When it comes right down to it, if you need to extract a crew, you need a way to do it quickly and efficiently," explains Marshall.

Each radio device, including the repeaters that allow their operation across the territory, is maintained by the two telecommunications officers. Their behind-the-scenes work ensures that wildfire crews can safely operate in Yukon's most remote job sites.

Lister came to wildland fire following a long career as a helicopter and small-engine mechanic. He was drawn to telecommunications work because "it was a new field to learn" and it presented good problem-solving challenges. Marshall is known for teaching a generation of wildland firefighters how to use their radios effectively at crewmember camp.

Marshall, who has worked for the Government of Yukon for 22 years and supervises the shop, compares Lister's tune-ups to "taking a Chevy Nova and turning it into a Maserati dragster."

In the spring, they train new firefighters on their radios and administer Restricted Operator Certificate testing. They also manage the branch's cell phones, which means handing out phones and activating numbers. Once crews are at their bases, they perform preventative maintenance on the repeater network and prepare their arsenal of portable repeaters, which can be deployed to boost the communications at specific wildfires.

Marshall and Lister also check over the power supply in a motley array of Wildland Fire Management equipment including the mobile incident command and communications trailers and the ignition program's aerial ignition machines.

As one of only two government radio shops, they support the wider public safety communications infrastructure by helping with non-wildfire repeater maintenance, and supporting the territory's 9-1-1 steering committee.

As summer turns to fall and equipment is returned, the comms shop shifts gears to projects that will improve telecommunications infrastructure. Upgrades to the repeater network – last done in 1998 – started this summer and will continue next year.

The first major step in this process was upgrading 11 stations' older repeaters to a new, rugged model and installing other equipment that supports their operation. They're joined by two new repeaters: Gold on Haeckel Hill, which links Whitehorse to Teslin, and Green, which is perched above Old Crow on Crow Mountain.

What's more, next summer plans are in place to move the Millers Ridge repeater, improving Carmacks' Green repeater coverage as tests will be done on Mount Kulan for a possible link between Carmacks and Ross River.



Telecommunications staff Jeff Lister, left, and Vern Marshall, right, in the Wildland Fire Management telecommunications shop.

Photo by Mike Fancie

And in response to extensive feedback, there are plans to program the newly-upgraded repeaters with a signalling system called tones that will stop overlapping repeater coverage from accidentally routing a radio user's message through the wrong system – something that could only realistically happen once the devices were upgraded.

Those upgrades should mean “significantly increased coverage” of up to 50 per cent in some parts of the Yukon – not to mention the monumental task of reprogramming every WFM radio.

“We’re constantly improving, not just maintaining,” explains Lister. “I always like improving things. Good enough is not good enough for me. I want to make it really good. That’s what makes the job fun.” 🍀

Vern and Jeff keep day-to-day operations top of mind when they plan their projects. These are some of the best tips they have for fire crews who want to be more capable communicators:

- Everyone on your crew should know how to use all the communications tools being brought into the field. If the person carrying a tool gets injured, someone could still have to use it call for help.
- Know how to scan frequencies on your radio so that you can call for help if your primary channel isn't working.
- Hold your radio so the antenna can radiate 360 degrees. If it's on your chest pack and the repeater is behind you, the signal might not make it!
- Test and mark a strong communications location on the fireline when you arrive to make sure your messages are delivered the first time. If you walk through a dead zone as you're sending a message, you'll waste time having to find out and then repeat yourself.

FIRES RAVAGE YUKON FARO GONE PELLY MAYBE

(Cont'd. from 10 1)

...men, many with long hair hanging out under their hard hats.

Fire marshal Tom Naim said the excellent communications and the number of volunteers who turned out saved the day.

A Mitchell fire bomber twin-engine aircraft started work Saturday and is still dumping water on the close-to-Whitehorse fire. It carries a thousand gallons a trip and makes the circuit every ten minutes. The aircraft requires too long a landing strip to be used anywhere in the territory except at Whitehorse and Watson Lake.

FARO BURNS

There were two fires at Faro, the town being built on the shores of the Pelly River, twelve miles from Anvil mine.

The first started right in the town on Thursday midnight and took out 500 feet of power lines. It was fought by construction workers who had it under control enough for Forestry people to take over the next day. It flared up again at 2:30 to 3 p.m. Friday and was checked right away.

Then, that night, a fire started two and a half miles northwest of Faro racing through the town and there was no saving it. Some of the men went to help possess Anvil mine. 12 miles away. Others spent the

night on the south side of the Pelly River bridge. A small amount of heavy equipment was brought across the river and saved.

But back at Faro, 50 dwellings in various stages of construction were leveled by the flames. The Champeo catering company of Vancouver which services construction crews at Anvil and Faro, lost five of its site trailer units, the kitchen, commissary and recreation rooms. Two diesel engines which supplied power in the area were destroyed, but some propane tanks did not explode and are intact, according to reports.

The Northern Canada Power Commission's hard-wired transmission lines, which had been supplying power from Whitehorse for one day, were destroyed.

An Anvil spokesman estimated the loss at \$700,000 but this does not include Champeo and N.C.P.C.'s estimate of damage. Representatives of Anvil were to meet with Commissioner James Smith late this afternoon to announce what the company will do now.

A company spokesman, Bert Cook, told The Star Saturday that he didn't think the fire would delay the housing project and that the buildings would be replaced.

Another man who fought the fire expressed some doubt that this was yet true. The whole area, he said, was burned black.



FARO TOWNSITE FROM THE AIR following Friday's disastrous fire. The smoke lifted just long enough for the photographer to get this picture Saturday afternoon from a Lead Construction Beucher's airplane. The townsite, with 50 buildings so far under construction to house the employees of Anvil by a forest fire. No one seen's sitcom officials are in essence to see

A newspaper article sums up the Friday the 13th fires the following Monday.

Whitehorse Star

The weather forecast for Friday, June 13, 1969 was printed alongside an evacuation order for Crestview as a wildfire approached its edge.

Yukon Daily News

FLASH!

Residents of Crestview have been ordered to evacuate their homes. The order was issued by the Forestry Service at 3:30 p. m. this afternoon as the large forest fire raging out of control in the area is fast advancing on the community.



Weather

Weather office gives us no break in the weather. Low and high 48 and 85. Outlook: Hot and dusty, clear tonight sunny tomorrow.

Looking back

The fire summer of 1969 remembered

It had to be Friday the 13th.

On that June day in 1969, Yukoners across the territory were faced with one of the most complex wildfire situations in their history. By Monday, Faro would be gone – while other communities battled their own threatening fires.

Everyone was on edge as the Yukon experienced what the Whitehorse Star called “record-high temperatures and tinder-dry forests.”

The previous weekend, a campfire used to grill “three t-bone steaks” escaped control and was contained by local residents who drove past the fire and dry-mopped a control line with sacks, spruce boughs and blankets in 20-kilometre winds. Their heroism was later dubbed “the true Northern spirit” by a federal forestry spokesperson.

A wildfire was reported outside of Porter Creek on the afternoon of June 13 at 1:30 pm. The Yukon Daily News reported that RCMP officers spent the afternoon “conscript[ing] firefighters off the streets and out of the bars, although an all out conscription situation has not yet been

declared.” About 150 men eventually took part in the response. A Trans North Turbo Air helicopter, a B-25 Mitchell bomber retrofitted to carry water and at least 25 bulldozers joined the fight. By Monday, the fire was held, but not before burning within a kilometre of evacuated Crestview homes.

North in Pelly Crossing the community’s women and children had been bussed to Mayo and Elsa, according to paper, as another fire crept to the community’s edge. This fire was eventually stopped at a fire break on the weekend.

The young Town of Faro – at the time 50 dwellings under construction for the Anvil Mine – was not so lucky. While construction workers managed to control a Thursday night fire that severed power lines, a lightning-caused fire caught on Friday night.

“It descended on Faro racing through the town and there was no saving it,” wrote the Whitehorse Star in 1969 in an article titled “Fires Ravage Yukon.”



Volunteers waiting
for their wildfire
assignment

Wildland Fire
Management archive



Volunteer
firefighters at a
staging area.

Wildland Fire
Management archive



The Crestview/Porter Creek fire.
Wildland Fire Management archive

The Pelly Crossing fire.
Wildland Fire
Management archive



Volunteer "smoke eaters"
mop-up hot spots
outside of Porter Creek.
Wildland Fire
Management archive



The B-25 Mitchell
bomber that helped
defend Porter Creek
and Crestview.
Wildland Fire
Management archive



An aerial photo shows the
wildfire that burned Faro.
Whitehorse Star





Good drone, bad drone

New policy balances safety and technology

As drone technology soars to new heights, it's been a game changer for countless industries, including wildland fire.

Next year Wildland Fire Management is introducing a new policy to guide the use of drones, or Remotely Piloted Aircraft Systems (RPAS), by staff and contractors. The policy is aimed at ensuring safe and efficient drone operations during wildfire management activities.

Drones and aircraft don't mix, explains air attack officer Tom Hutchings, who helped develop the new policy. His concerns are rooted in safety: drones, if unregulated, can pose significant risks to aerial operations.

"We spend a lot of time flying low and fast in bad visibility environments. Throughout the history of wildfire aviation there have been a lot of incidents and accidents.

"Effectively, a lot of the existing rules are written in blood and so the last thing we want is another hazard – an unknown hazard – coming at us that we can't control," he says.

This is why under Canadian Aviation Regulations, it's illegal to fly a drone or operate aircraft within 9.3 kilometres (five nautical miles) of a wildfire.

If unauthorized drones are present, firefighting aircraft must be grounded and crews must suspend operations. This can delay a firefighting response and put communities at risk. Anyone caught operating a drone within an active wildfire area could be fined up to \$25,000 or jailed for up to 18 months.

While unauthorized drones are a risk, the use of the technology in coordination with aircraft is also increasingly seen across North America to aid wildfire response.

"Drones can offer a different perspective and are cost-effective," says Milan Lapres, another staff member who developed the new policy. "Without having to pay for a helicopter, you can send a drone up in the air and get quick, very high-resolution imagery, which is super beneficial."

In the Yukon, drones have already been used to locate and log hotspots on fires so firefighting crews can confirm and extinguish them. They've also been used for public education, fuel management mapping and research on prescribed burns.

But all of this has taken place without an official policy on who could authorize their use, how they should be used and what kind of safety requirements needed to be in place.



"Without this groundwork of having the policy and the standard operating procedures, we can't really start purchasing more drones or training more people in a standardized way," says Lapres.

In May of 2023 a drone task force was started that included Lapres and Hutchings. The goal was to create new guidelines that would balance aircraft safety with the potential benefits of RPAS technology.

According to the new policy, everyone operating a drone for wildland fire must be licensed, even for the use of micro drones. Pilots must conduct site surveys, inspect drones before and after every flight and record detailed flight logs. Every flight needs to be coordinated with staff on the ground and in the air.

"A Remotely Piloted Aircraft will not be authorized to fly while a manned aircraft is operating within the restricted airspace," reads the policy. Flights can be authorized by the incident commander, air attack officer, air operations branch or the regional duty officer.

The new policy is expected to be finalized and approved by January 2025.

Hutchings and Lapres hope feedback on the new guidelines will not only enhance safety but



also allow for the territory to keep up with emerging uses for drone technology.

"Over the last 10 years, it's been wild how much drones have improved and how much has come out. I think it's going to be pretty interesting to see how things change in the next few years," says Lapres. 🍋

Above, header

Fuel management technician Milan Lapres operates a drone during a prescribed burn on Sept. 19, 2024.

Above

Two staff members from the department of Energy, Mines and Resources show off a drone used for hot spot detection on the Takhini Bridge fire in 2023.

Photo by Haley Ritchie



A woman rakes up leaf debris during a FireSmart community clean-up event in Hillcrest.

Photo by Haley Ritchie

Two firefighters from the Yukon First Nation Wildfire unit crew work on MA-021 on July 1, 2024.

Photo by Haley Ritchie





Heat of the Moment

Supporting mental health in wildland firefighting

With fire seasons stretching on longer than ever before, good mental health and proper rest are necessary for wildfire personnel to do their jobs safely while living fulfilling lives away from the fire line or desk.

Mental health in wildfire work should never be a lone struggle, explains Dawson regional protection officer Kyle MacDougall.

“A career in wildfire will challenge your physical, emotional, mental and spiritual well-being. We must collectively acknowledge that these demands and sacrifices are adherent to the job. It’s inevitable, the job is going to affect you, your family, the public and your co-workers,” says MacDougall, an advocate for mental health awareness and supports in wildfire work.

“Good leaders and teammates, I would say, need to recognize and actively seek ways to mitigate these challenges,” he says.

Wildfire work is predictably unpredictable. Personnel are constantly adjusting how to prepare to face the ever-changing variables of a given day.

Cortisol and adrenaline can run high during active fire situations. However, after the high is over, MacDougall cautions that the letdown can be “physically and mentally taxing.”

“You ride the highs when it’s busy and dynamic,” he says. “You’re running on adrenaline – you lock in as time slows down, it’s exciting. But when the rain comes, you gotta dig in and finish strong.”

In all workplaces, but especially in wildfire work environments, discussing mental health with your colleagues and loved ones can save lives.

Safety and training manager Linda Brandvold says Wildland Fire Management has both formal and informal supports to help people manage the ups and downs of the season.

She points out that many Wildland Fire crews and staff in Yukon regions have established well-being practices such as weekly dinners on base or hosting barbecues where everyone pitches in, allowing everyone to check in with one another.

A photograph showing a firefighter using a drip torch to ignite a prescribed burn. The scene is outdoors with trees and a blue sky with some clouds. The ground is covered in dry vegetation and some small flames are visible.

A firefighter uses a drip torch during a prescribed burn on Sept. 19, 2024.

Photo by Haley Ritchie

In first responder work, mental health – along with physical health – must be prioritized. If you or someone you know is in mental health crisis, 9-8-8 is Canada’s national suicide prevention helpline. It is available online, via text or over the phone in English or French.

“You’re able to build that trust that is oftentimes required for being able to talk about what might be going on,” she says. “During the off-season too, I think making sure that we’re keeping in contact and checking in on each other is important to do when people come down from that adrenaline high.”

Yukon government employees can access the Employee and Family Assistance Program and other benefits to access professional guidance. The Canadian Mental Health Association Yukon is another valuable resource for support, including subsidized counsellors.

Firefighters are also encouraged to participate in Resilient Minds training, a flexible course developed by the Canadian Mental Health Association that helps first responders recognize early signs of psychological stress in themselves and teammates.

Some of the most common mental health concerns and illnesses that emerge during wildfire work include anxiety, depression and post-traumatic stress disorder. However, fatigue and cumulative stress can also present as “invisible injuries.”

Symptoms of fatigue or mental stress include stumbling over your feet or experiencing changes in personality. For example, someone who is generally very bubbly and outgoing while mentally healthy may be more reactive or turn inward.

MacDougall shares that he was raised in an environment where feelings and mental health were not discussed; however, attempting to balance wildfire work, raising his family and a spinal cord injury catalyzed him to seek counseling and healthy ways to deal with his mental and physical challenges.

“The ‘just put your head down and work through everything’ attitude served me quite well, until I got hurt, right?” he explains. “It got to a point where I realized the ‘suck it up and go’ attitude is not the answer.

“We need to support each through the objective analysis of our experiences as we navigate through a fire season – good and bad. Process that information, seek clarity, resolve and build resilience.” 🍀

Faces of WFM

Ironrust crew.
Photo by Darin Arthurs



Crews extinguish an abandoned campfire outside of Haines Junction.
Photo by Derek Wolfe



Yukon firefighters stayed in the shadow of Mount Baker while assigned to the Williams Mine fire in Washington.
Photo by Stedson Laverdure



An impressive smoke column.
Photo by Jenna Green



Firefighters prepare a pumpkin tank for top-up by a helicopter.
Photo by Jenna Green



A work of art in
Haines Junction.
Photo by Kris Johnson

Staff hard at work in front
of the Mayo Fire Centre.
Photo by Dave Trudeau





It isn't a bad idea if it works!
Photo by Rob Westberg



Ryan Nixon rides a bike in Haines Junction.

Photo by Derek Wolfe

Firefighters look out over a fireguard.

Photo by Rob Westberg



You never know what you'll find on a wildfire.

Photo by Rob Westberg

Taiga crew in the sky over Dawson.

Photo by Maya Cairns-Locke

Wildland Fire Management's new initial-attack engines were deployed to their first wildfires this summer.
Photo by Allan Lee



Whitehorse firefighters extinguish a small fire beside the Yukon River.
Photo by Ainslie Spence



Ironrust and Greyhunter crews pose on the fireline.
Photo by Darin Arthurs





Firefighters attach an aerial ignition machine to a helicopter.
Photo by Darin Arthurs



Yukon and BC Wildfire firefighters pose while working on MA-006 in Mayo.
Photo by Kyle Gilson



Yukon crews working on export in Washington.

Wildland Fire's Kris Johnson and Tyson Cole taking a photo with a colleague outside Jasper, Alberta.
Photo by Kris Johnson



Dave Trudeau literally passing the torch to his son Lucien.



As shown in Carmacks, Wildland Fire staff come in all shapes and sizes!

Photo by Jeff Melnychuk



Happy Dawson firefighters after another fireline day.

Photo by Maya Cairns-Locke



Firefighters manage a prescribed burn organized by Wildland Fire Management and Parks Canada at the Haines Junction Fire Centre.

Photo by Derek Wolfe



Tombstone crew stages at a helicopter near a wildfire.

Photo by Brandon White

Dawson's Guy Couture, Seamus Belton and Phoenix Skailles at work on the fireline.

Photo by Phoenix Skailles



A fire researcher places flags to identify a grid during a prescribed burn on the Whitehorse South Fuel Break on August 12, 2024.

Photo by Haley Ritchie

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