



Members of the Fairbanks #1 crew fight the Tetlin River Fire in June. The crew worked four fires this season. SAM HARREL/ALASKA DNR

## More fires, fewer fighters

*Alaska's emergency wildfire crews are burning out*

BY GLORIA DICKIE

**S**now machines tow caribou-hide toboggans across the Arctic landscape on a clear March morning. In the distance, sled dogs yelp in chorus, surrounded by shivering visitors from the Arctic Council, here to watch dogsledding, an Alaskan pastime. It's just 10 degrees out, but all Ed Alexander can talk about is how warm it's been. So warm, he says, that wildfires started in February.

Wildfire is part of life in Alaska's rural interior. During summer, it's not uncommon for more than 2,000 lightning strikes to touch down in a single day, igniting the dry, hot lowlands. Emergency Firefighter Type 2 crews, consisting primarily of local Alaskan Natives, typically serve as the first line of defense against conflagrations. "Most people here have fought wildfire in some form throughout their lives," says Alexander, who served eight years with the Denali Hotshots and is now the Yukon Flats Center coordinator at the University of Alaska.

Yet more and more would-be-firefighters are seeking economic opportunities elsewhere, leaving remote villages vulnerable to wildfires made more intense by climate change. Many wonder how much longer Native villagers can be protected from flames and smoke before they're forced to flee for good — a new wave of climate refugees.

Alexander is based out of Fort Yukon, an Alaska Native village, population 600, at the junction of the Yukon and Porcu-

pine rivers, about 145 miles northeast of Fairbanks. It epitomizes the challenges facing local communities.

Lately, lightning strikes have been starting in April, roughly two months ahead of time. Lightning ignites most fires here, and climate change has made the area increasingly flammable — since 1949, Alaska has warmed by about 3.5 degrees Fahrenheit. The fire season has grown by about four days per decade, and the state recently moved the official start date from May to April. Last year, more than 5.1 million acres burned, second only to 2004, when fires blackened 6.6 million acres in the Frontier State.

The fires have come perilously close to villages, where escape by road is often impossible. Bush pilots have spoken about the difficulties in getting people out in the wake of thick smoke, and last summer, residents of Nulato, downriver from Fort Yukon, had to evacuate by boat when fire threatened their community.

This remoteness makes first responders — the Type 2 EFF crews — even more essential. With close ties to the land and each other, Native crews are "a little bit more dialed in on everything from weather patterns to bear-proofing fire camps," says Matt Kilgriff, the Bureau of Land Management's Galena Zone EFF coordinator. Alaska's fuels and terrain are different from the Lower 48's, and that gives locals the upper hand over hotshots in unfamiliar territory. Moreover, the jobs are an economic boost for communities where unemployment can reach 90 percent.

"The economic benefits of EFF crews in these communities is huge," says Louis

Silas, wildland fire program manager for the Council of Athabascan Tribal Governments. In a busy year, an EFF crew member can expect to take home roughly \$20,000 by the end of the season, enough to get a family through a long winter.

Despite the benefits, though, in the past decade crew numbers have fallen by about half in remote communities, says Kent Slaughter, a manager of the Alaska Fire Service. Three years ago, Upper Yukon had 10 emergency firefighting crews. Today, only four remain — two in Fort Yukon and two in Venetie. As Silas, a half-Athabascan Native who fought fires for 17 years, explains, "There's just not enough people and not enough interest."

While some have left for energy jobs on the North Slope, others, Silas thinks, have been discouraged by the work's unpredictable nature. People are reluctant to fulfill the physically arduous training requirements if they're not going to get called out on assignment, especially if steadier work is available at local schools or state fish and game agencies. Moreover, many Alaska Natives are subsistence hunters, and all too often the fire season collides with fishing season. "If it's a choice between going out on assignment and going out and fishing for your family, it's very tough," says Kilgriff. "The fish don't last forever, but the fire season doesn't either."

Last year's overwhelming fires, Kilgriff says, kindled a slight uptick in interest at firefighting training sessions held across the interior this past May. "A lot of people came back with new fishing nets, new guns, and new snow machines. They got people interested in fire."

Still, if the fires continue to get bigger and burn longer, more firefighters may not be enough, and it's unclear just how long these remote villages will remain habitable. "It's not very forgiving country," says Kilgriff, "even in the summer." □

### THE LATEST

#### Backstory

A methane "hot spot" over the Four Corners region has puzzled scientists for nearly a decade: Concentrations of the greenhouse gas were far higher than could be accounted for by official inventories from known contributors — an underground coal mine, landfills, and oil and gas infrastructure. So in 2015, **NASA scientists began an intensive examination of energy infrastructure, geologic methane seeps exacerbated by drilling and other potential sources** ("Unlocking the mystery of the Four Corners methane hot spot," *HCN*, 8/31/15).

#### Followup

In August, **NASA released a study saying that the hot spot is largely due to natural gas production.** An aerial survey detected 250 individual sources, including gas wells, storage tanks and pipelines, that together account for gas emissions at rates up to 11,000 pounds per hour. Of those, just 25 "super-emitters" accounted for a quarter of all methane spewing into the atmosphere. Industry representatives dispute the findings, though, saying NASA overlooked geologic seeps to focus on oil and gas.

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**Methane and heat emitting from a gas plant in Bloomfield, New Mexico.** EARTHWORKS



Gloria Dickie is a freelance science and environmental journalist based in Boulder, Colorado.

Twitter: @GloriaDickie