BLM - ALASKA

FRONTIERS

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900 acres up in smoke

Nine hundred acres of boreal forest went ablaze in Interior Alaska last July. It wasn't a spontaneous wildfire, however; five years of planning and research were behind the experimental burn, dubbed "Frostfire." The University of Alaska Fairbanks says more than 50 research teams from the U.S., Canada and Japan are studying fire behavior, and how it may affect global climatic changes of boreal ecosystems.

Flames produced by the prescribed burn experiment mimicked natural conditions: black spruce and feather moss burned rapidly within the fire's 2,000-acre perimeter, while flames moved more slowly through hardwoods and sphagnum moss.

Frostfire is easily the most documented fire in history. One unusual feature of the experiment was the extent of media coverage. For seven days, a six-person crew from National Public Broadcasting followed fire activities for production of an upcoming NOVA segment. The National Interagency Fire Coordination Center based in Boise, Idaho, also assigned a film crew to document the fire and the related research.

BLM Alaska Fire Service (AFS) firefighters used drip torches to light flames along the firebreak for the prescribed burn known as "Frostfire" — a fire management experiment to study fire behavior and how fires in boreal forests may effect changes in global climate. The fire was conducted last July by the AFS at the request of the University of Alaska Fairbanks.

FROSTFIRE

900 ACRES UP IN SMOKE MAY SAVE COUNTLESS ACRES LATER

AFS fire fighters use drip torches to start areas of the controlled burn, Frostfire. More than 50 research teams from the U.S., Canada, and Japan are studying fire behavior and its effects on climate and boreal ecosystems.

In July, 900 acres went up in smoke in the 2,000-acre Caribou-Poker Creeks Research Watershed north of Fairbanks. The fire wasn't caused by lightning or a careless camper, however. It was a controlled burn dubbed "Frostfire," conducted July 8-10 by the BLM Alaska Fire Service (AFS) at the request of the University of Alaska Fairbanks (UAF). UAF says more than 50 research teams from the U.S., Canada and Japan are studying fire behavior and its effects on climate and boreal ecosystems.

The fire burned about 90 percent of the black spruce in the 2,000-acre research area, but it did not "carry" well in other fuel types, confirming what fire crews have known for years: Fire races through stands of black spruce and feather moss, but moves more slowly and with less intensity through hardwoods and sphagnum moss.

The burn plan for Frostfire prescribed an array of conditions to be met before the fire was lit. The challenge for AFS was to make the burn hot enough so scientists could see the full range of effects, but not so hot that it would jump the control lines.

Over the past two years, the Chena and Midnight Sun hotshot crews built a firebreak about 80 feet wide. On July 8 and 9, after laying pumps and hoses around the perimeter, the crews burned out along side it, creating a black line 300 feet wide.

Sue Mitchell, who helped UAF coordinate the fire, organized public meetings where people could have any concerns addressed. Mitchell and fire managers also helped a camera crew from WGBH in Boston, which produces the PBS program NOVA. The crew filmed the fire from a helicopter and from the ground.

On the days of the burn, a fire management officer from AFS stood on top of Haystack Mountain with a radio, describing the action to interested residents. Haystack Subdivision, with about 25 residences, lay two miles to the southwest.

Upon completing a "go-no go" check list, a test fire was set on the line about noon on July 8. The tests were favorable, and crews began hand-lighting along the firebreak with drip torches, burning at least 300 feet into the green. Burning and holding, the firefighters worked around the southwest corner until early evening and then began firing with the wind at their back. The pace of the fire picked up rapidly, and the plume of smoke was visible from Fairbanks, 35 miles away.

The burners wrapped up about 9:30 p.m. and came back the next morning to finish. They planned to complete the hand-lighting by early afternoon, and then return to their safety areas to observe a helicopter light the middle area. Some fire spots crossed the control line, however, and it took firefighters and helicopters until late afternoon to put them out.

At 5:30 p.m., AFS burn boss Dave Dash

(Left and below) Researchers are measuring chemical emissions in the smoke produced by Frostfire, as well as the amount of carbon consumed, the effects on wildlife and habitat, and how vegetation returns after a fire.

gave the signal for the helicopter to begin burning. The helicopter flew back and forth, dropping "ping pong balls" filled with fire accelerant, a mixture of glycol and potassium permanganate that reacts inside the spheres, bursting into flames when hitting the ground.

The helicopter finished burning with a helitorch that streamed flaming strips of gelled fuel across the burn area. In spite of the accelerants, the result was a half-hearted fire. Scattered clouds shaded sunlight and the humidity climbed. The helicopter gave up and the operation shut down for the night.

The next day broke sunny and warm, and with humidity dropping rapidly, a fire sprang up on its own. Helicopters were used to drop water on a five-acre burning spot that developed south of the fireline. It was quickly contained by the hotshot crews and bucket drops.

AFS kept crews on the fire for a week after the burn, putting out hot spots 100 yards from the perimeter. Later, rains came and finished putting it out.

Larry Hinzman, one of the principal investigators at the UAF, called it a "major success." Hinzman says scientists believe boreal forests are burning at a faster rate now than in the past, and that this may be caused by, and be contributing to, global warming. Wildfires in the north release an enormous amount of carbon dioxide, a major greenhouse gas. As global warming continues, Hinzman says the size of boreal fires is likely to increase.

One researcher measured chemical emissions in the plume from a helicopter. Others will measure the amount of carbon consumed, the effects on wildlife and habitat, and how vegetation returns after a fire. For more information, see the Frostfire website at www.fsl.orst.edu/fera/frostfire.html.

The burn was short-lived, but Frostfire's benefits should continue well into the future.

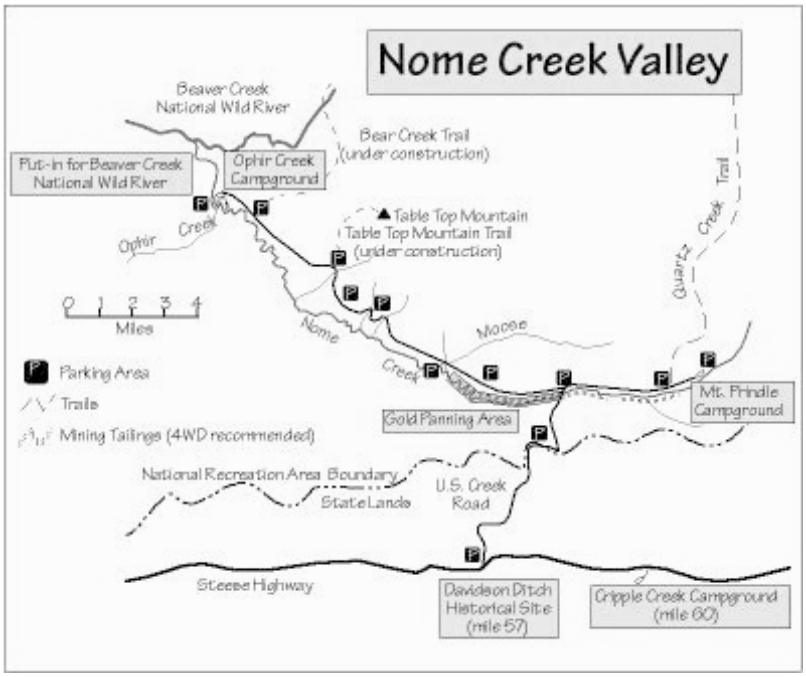
— Andy Williams

Nome Creek Road — gateway to White Mountains NRA

For about the last 20 years, the one million-acre White Mountains National Recreation Area, created in 1980, has drawn people interested in winter recreation pursuits such as cross-country skiing, snowmobiling, dog mushing, and winter cabin rentals. But with the opening of the Nome Creek Road, visitors now enjoy outdoor activities year-round.

The Nome Creek Road, known as the Gateway to the White Mountains, opened in the summer of 1998. The 16-mile gravel road is 20 feet wide and has improved public access to the NRA and to Beaver Creek National Wild River. The road needed work because of ice damage last winter and settling of the road.

"Since the road opened last year, we've seen an increase in visitor use fishing, hiking, recreational gold panning and camping," says BLM outdoor recreation planner Randy Goodwin. "We're also working with the Alaska Department of Transportation to widen U.S. Creek Road to allow better access for recreational vehicles."



Other projects include a hiking trail to Table Top Mountain, a wayside for the Davidson Ditch historical site, and improved trailheads. In addition to improved access, the Nome Creek Gateway Project also included developing two new campgrounds — Mount Prindle and Ophir Creek, a gold panning area and improved access for the Beaver Creek.

Surrounded by alpine tundra meadows, Mount Prindle Campground is at the upper end of the Nome Creek valley and has 13 campsites. It's near the Quartz Creek Trail, making it an ideal spot for a base camp on a trip to the high country.

The Ophir Creek Campground is at the lower end of Nome Creek and has 19 campsites. Here, tall white spruce line the banks of Nome Creek, and you can enjoy fishing or take a short day-hike along Nome Creek.

BLM used mine tailings left by an old floating dredge to help build the recreational gold panning area. Just like the early sourdoughs, recreational gold panning is limited to hand tools and light equipment such as gold pans, rocker boxes, sluice boxes, picks and shovels.

To get to White Mountains NRA from

The Ophir Creek Campground is at the lower end of Nome Creek and has 19 campsites. The campground is nestled in tall white spruce trees on the bank of Nome Creek. From here you can enjoy fishing or take a short dayhike over to Beaver Creek.

Fairbanks, take the Steese Highway to mile 57 and follow the U.S. Creek Road to the Nome Creek Road. About 30 miles down Nome Creek Road, there is a fork; to the right, it's four miles to the upper end of Nome Creek Valley, the Quartz Creek Trailhead and the Mount Prindle Campground. To the left, it's 12 miles to lower Nome Creek, the Ophir Creek Campground, and the put-in for floating Beaver Creek National Wild River.

Information about White Mountains National Recreation Area and the Nome Creek Valley is available on the web site at: aurora.ak.blm.gov/whitemtns. If you are adventuresome, a trip to the White Mountains can be a breathtaking experience!

—TERESA HERRERA

Nome Creek Valley is located north of the Steese Highway in the White Mountains National Recreation Area. Since the 1890s, miners and trappers have lived a subsistence lifestyle in this area of Alaska wilderness. Today people come to the valley to camp, hike, pan for gold, fish, or just relax in the outdoors.

Changing of the guard

Five years ago, the Bureau of Land Management's Alaska Resource Advisory Council (RAC) was created to advise the BLM on resource and land management issues for the 86 million acres of public land that BLM manages within Alaska. Since its beginning, the Alaska RAC has examined dredge mining on the Fortymile River north of Fairbanks, and issues associated with 17(b) easements — easements that cross Native allotment lands.

Council members come from all over the state. They have different backgrounds and represent diverse interests, but they all aim for consensus on public land management issues. The 13 members are divided into three groups representing economic and recreation interests; conservation, environmental and academic interests; and elected officials, Native corporations, and the general public. The three reappointed members of the RAC will ensure continuity while 10 new members bring fresh perspectives.

RAC members appointed for the two-year term that began September 19 are:

Oil & gas; Mining, and Commercial recreation interests:

- Brett Carlson, Owner/Operator, Northern Alaska Tour Company (Fairbanks)
- Tom Crafford, Geological consultant (Anchorage)
- Gary Gustafson, Senior landman, BP Exploration (Anchorage)
- Larry Taylor, Miner/Recreational tour guide (Eagle)

Conservation; Historic, and Dispersed recreation interests:

- Susan Olsen, Alaska Quiet Rights Coalition (Anchorage)
- John Stroud, Environmental Systems Research Institute (Anchorage)
- David van den Berg, Wilderness guide (Fairbanks)
- Elizabeth Whealy, Alaska Raptor Rehabilitation Center (Sitka)

Elected officials; Alaska Natives, and the Public-at-large:

- Karen Burnell, Vice President of Human Resources, Arctic Slope Regional Corp. (Barrow)
- Tom Hawkins, Senior Vice President, Bristol Bay Native Corp. (Anchorage)
- Larry Houle, Executive director, Heritage Land Bank (Anchorage)
- Paul Roehl, Land manager, Bristol Bay Native Corp. (Anchorage)
- Rick Solie, Jr., Fairbanks North Star Borough Assembly

All advisory council meetings are open to the public and include a public comment period. Biographies of members, minutes of previous meetings, and announcements about future meetings are available on the website: www.ak.blm.gov/advisory.html.

—TERESA MCPHERSON

ARLIS offers bones, books and info

Theresa Herrara

BLM librarian Cathy Vitale shows just one of the resources to be found at ARLIS.

Want to make your research easier? Then make a trip to the Alaska Resources Library and Information Services (ARLIS). It has a wide variety of books on natural resources and related topics including an extensive legal section. And it's open to the public.

ARLIS is a partnership of eight natural and cultural resource libraries and information centers, created as a cost-saving measure in response to government budget cuts.

Government agency employees can access full-text indexes from their desks. "ARLIS' goal is to be the motherlode of information about Alaska natural resources," says BLM librarian Cathy Vitale. "We want to make agency employees' jobs easier by having an extensive library. If the information is unavailable to the employees, then we'll borrow from other sources."

Like all Alaska libraries, ARLIS is introducing web access to full-text periodicals. The web site address is: http://library.ci.anchorage.ak.us/online.html, which takes the user to the Anchorage Municipal Library web page. To obtain full-text periodicals, select any statewide category. "It's a wonderful opportunity to get articles or information for a report for kids," says Vitale.

Public services include Internet access, catalog searches on the web site, access to state-provided full-text periodicals, and library access to natural resource subject-oriented indexes.

The Fish and Wildlife Service (FWS) has environmental education kits available for interlibrary loan statewide. Categories include birds and wetlands; land mammals; marine mammals; sea/fish; earth sciences, and fire. An exciting *Cargo for Conservation* kit includes numerous products actually made from endangered species from around the world, that were confiscated by FWS law enforcement officials. The library also has skulls and furs for educational purposes available for loan in the Anchorage area only. For more information, contact Nancy Tileston, FWS librarian. The kits are available at no charge other than borrowers are responsible for return shipping.

For more information, callARLIS at (907) 272-7547.

—Teresa Herrera

Alyeska holds oil spill exercise on Gulkana River

Alyeska Pipeline Services Company held an oil spill response exercise on the Gulkana River just south of Sourdough Creek Campground in late July. Thirteen employees participated in the oil spill containment drill. Prior to the drill, the Glennallen Field Office authorized a swiftwater safety and rescue training session for Alyeska personnel at the Sourdough Creek Campground area.

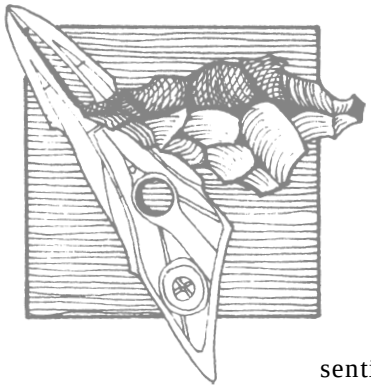
Alyeska staff were sensitive to the popularity of the Gulkana River, and took care to minimize any inconvenience to river users by scheduling the drill on a weekday and arranging to intercept boat traffic entering the area. Jim Criner, Alyeska Pump Station 12 Maintenance Coordinator, says, "Overall, the drill was a good exercise that helped to introduce the Pump Station 11 spill response team to the Gulkana River containment site."

— KJ Mushovic

Jim Criner

Alyeska employees from Pump Stations 11 and 12 of the Trans-Alaska Pipeline deploy a containment boom from the bank of the Gulkana River during an oil spill drill. The drill was held by Alyeska Pipeline Services Co. at the boat launch area south of the Sourdough Creek Campground.

Word travels about Alaska archaeology handbook for teachers



When BLM archaeologist Dr. Robert King and former BLM writer Karen Laubenstein got together to design an educational archaeology handbook, they didn't follow the usual textbook format. King and Laubenstein wrote it as a novel for children, presenting a fictional family that experiences episodes of Alaska's history and prehistory. The children travel back through time and participate in events such as the Iditarod Serum Run, the building of the Alaska Highway, and even adventures in the prehistoric past.

Their unique approach to learning is making *Intrigue of the Past: Discovering Archaeology in Alaska* popular with more than just Alaskans. It was recently adopted as a required educational resource by the Lower Kuskokwim School District, centered in Bethel, and is also being used in states such as West Virginia.

*Intrigue of the Pas*t, published by BLM in 1996, is designed to help teachers educate grades four through seven about Alaska history and prehistory. The book includes a resource guide and lesson plans for teachers.

King and Laubenstein's collaboration is part of the national Heritage Education outreach program, in particular, Project Archaeology, a statewide effort.

The Alaska State Historic Preservation Office coordinates with other agencies, including the BLM and National Park Service (NPS), to set up workshops that introduce teachers to the Alaska handbook and to national program study materials. NPS funded workshops in Bethel, Fairbanks and Anchorage earlier this year, with others scheduled for Sitka and Barrow.

The handbook is also available through Project Archaeology program coordinator Dr. Diane Hanson, at the Alaska Office of History and Archaeology in Anchorage. For information about publication and distribution of the Alaska handbook, call: (907) 269-8713. Δ

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