



Bags of Phos-chek fire retardant. The powdered retardant was replaced by a liquid concentrate after 1986.

"The early AFS facilities were located in the back of the main office building (they called it the old FAA building). In this building were the Zone Offices, Zone Dispatch Center (upstairs) and the Branch of Technical Systems (downstairs). The Branch of Supply worked out of old quonset huts. The Smokejumpers worked out of the T-hangar, and Helitack and Roadside from trailer houses."

- Jim Ward  
Acting State Aviation Manger,  
Retired



Above: The old FAA building- still home of the Galena (winter), Tanana, Upper Yukon, and Military Zones on the second floor, and on the first floor the Branch of Technical Systems.

Below left: The old smokejumper loft (yellow building). Below middle: Inside the old smokejumper loft. Below right: The old jumpshack.

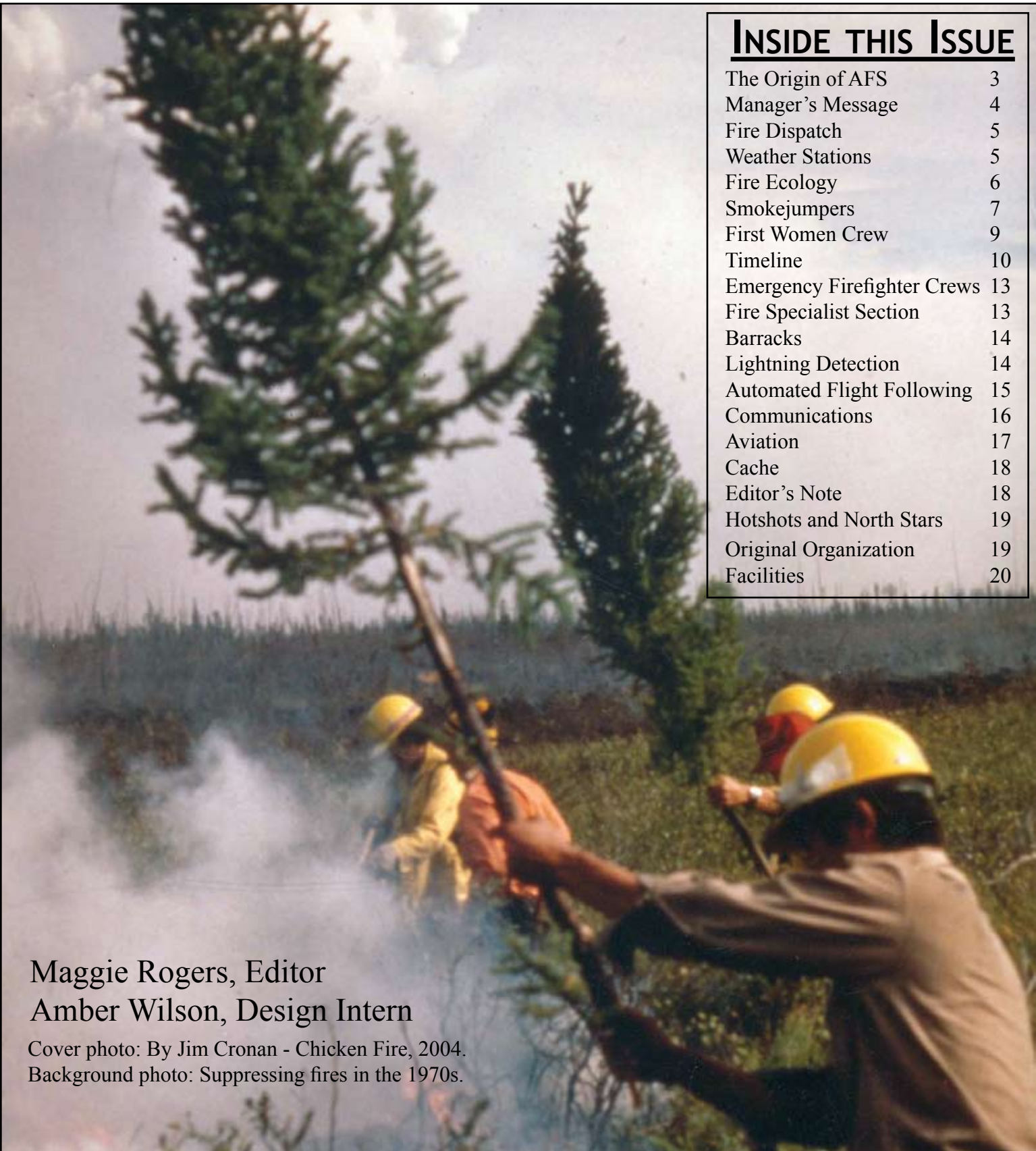


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# Celebrating 25 Years





Maggie Rogers, Editor  
Amber Wilson, Design Intern

Cover photo: By Jim Cronan - Chicken Fire, 2004.  
Background photo: Suppressing fires in the 1970s.

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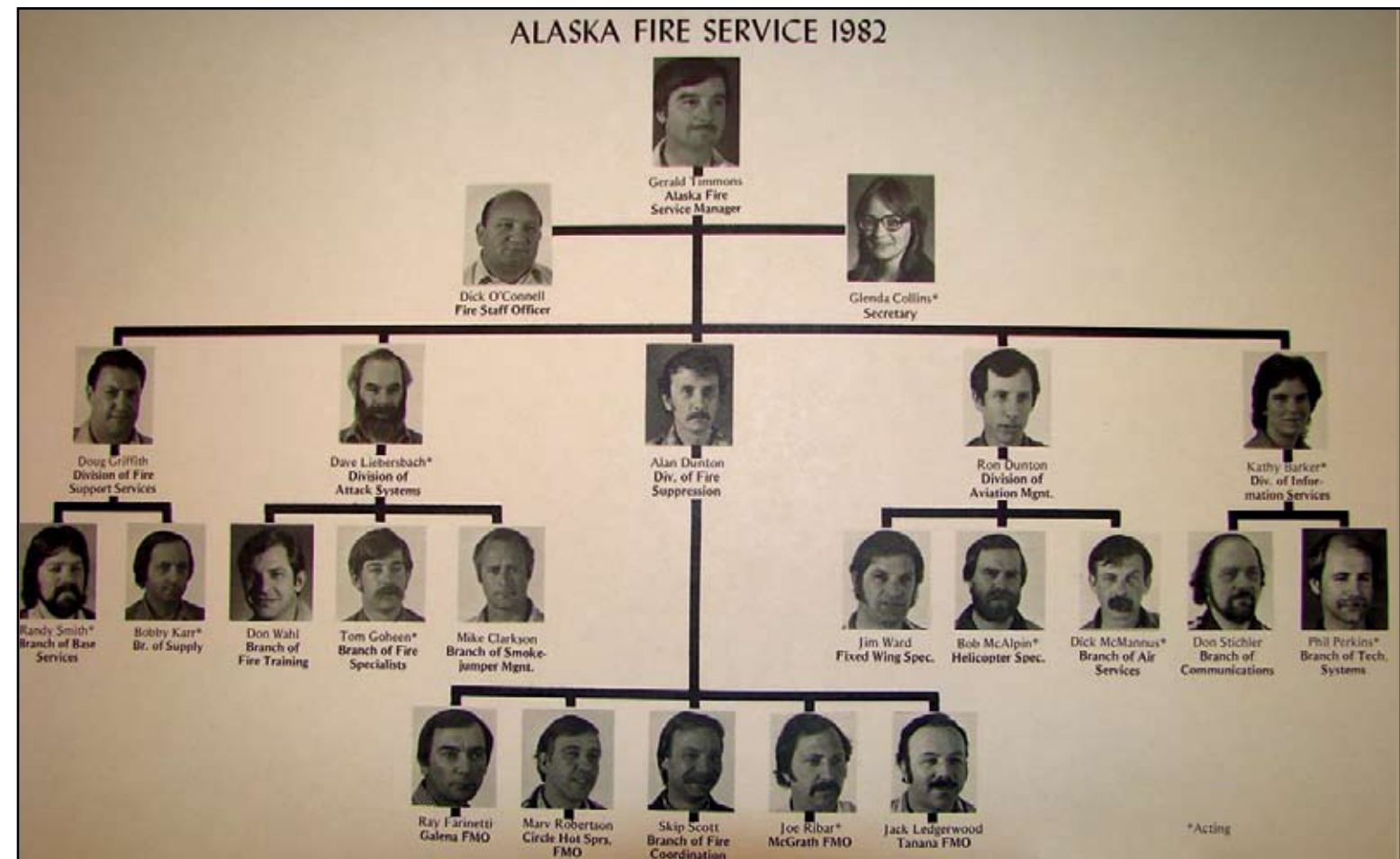
# Hotshots and North Stars

By Ilene Penas

In 1974, BLM established Alaska's first Hotshot Crew, an Anchorage crew, that was stationed in Kenai, in South Central Alaska. In 1976, three other crews were formed, the McGrath, Tanacross and Fairbanks crews. Each crew consisted of 16 people to meet the carrying capacity of the Twin Otter aircraft which, at the time, was their transport. The crews could be stationed at Tanacross, in the eastern Interior, and McGrath, in the western Interior, or Fairbanks, where the airports could support larger aircraft. After AFS was established, the four crews were consolidated into the Midnight Suns and Chenas and based out of Fort Wainwright. In 1984, they increased their numbers to twenty people each to meet Type 1 Interagency Hotshot standards. The Chena and Midnight Suns have since been stationed at Fort Wainwright, a U.S. Army Post on the outskirts of Fairbanks.

In 1987, the North Star Type 2 Crew was started to provide training opportunities for those new to fire, and to provide a pool of firefighters from which the Hotshot Crews could pull from. Between 1987 and 2003, the Chena and Midnight Suns, when not needed in Alaska, would detail to locations primarily in Northern California and Idaho, as well as Utah and Nevada, occasionally combining crews for Lower-48 fire assignments. In 1998, the Denali Hotshots were formed under an agreement between the Chugachmuit Native Corporation and the Alaska BLM. The Denali Hotshots would detail to various locations throughout Nevada from 1998 to 2006. Today, these four crews remain an important asset not only to AFS, but to the Interagency wildland fire community.

Photo caption according to Jay Peterson: One of the Anchorage District Hotshot crewmembers, Michael Delbecq, in 1977.



The original AFS organization chart.

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# Alaska Fire Service Cache

By Maggie Rogers  
Based on conversations with Rick O'Brien,  
Joanne Waller and Bev Fronterhouse.

One of 11 National Fire Caches in the country, the AFS warehouse has seen a lot of change over time. Until the mid-1980s, the warehouse functions were spread between buildings and locations. Issuing, Receiving, Rehab, and Stocks and Records changed buildings on the AFS complex on Fort Wainwright many times before they moved into their current building. Ron Krishnek, the Warehouse Manager, was the driving force behind the relocation of the warehouse in 1986. Though the functions are now located under a single roof, there has been a lot of shuffle within the building throughout the years. The warehouse today is the result of much-needed additions, including the large addition for Rehab, completed in 1994.

In two consecutive years, on the same date of each year, the warehouse experienced fires. The first fire happened in 1987 when the military intentionally burned one of two T-hangers, left over from World War II. The second hangar, which was used to store employee's personal gear, accidentally caught on fire. From this accident stemmed the policy that AFS stores no personal gear. According to Joanne Waller, "BLM used to really cater to its seasonal employees, then after [the fire] happened it was a no-no." One year later, in 1988, a fire in another outbuilding started when lights were left on. Cartons of MREs and sleeping bags were burned.



Firefighter gear stored at the warehouse.

Records of warehouse items were kept using note card decks until 1983 when AFS implemented an automated Inventory and Property Tracking system (InProTrac). The program facilitated a more accurate and efficient system to issue and return equipment and supplies. InProTrac also provides property reports, stock status, and financial transaction information, and a historical database of equipment movement and supply usage. Barcode technology enhanced InProTrac in 1995. This technology enabled the capability to replace manual data entry of transactions, eliminate redundant manual procedures, improve efficiency, minimize errors, and ultimately save money. Today, AFS remains the only National Fire Cache to utilize barcode technology.

Because of improvements in facilities and technology over the years, the AFS Cache is recognized and respected for their efficiency and service to the national fire program.



Fire camp of the past.

*"Every aspect of the organization changed, aircraft, parachutes, and even the tools that the firefighters used. The most radical changes were in the way we communicated to the field firefighter, and the incredible change in our ability to access information in real time for management decisions. We were able to access lightning occurrence and even be able to tell which cells had lightning strikes—not just strikes, but ground strikes. This, combined with information from remote weather stations and fire behavior modeling programs (which included fire fuels in the area) put the organization in much better position to respond."*

**-Kathy (Barker) Cullings  
Chief Division of Information Systems,  
Retired**

## Editor's Note

We would like to thank all who contributed time and energy into making this publication happen. It has been a privilege for us to not only dig deeper into the origin of AFS as an organization, but to learn about individual's experiences. Early on it became apparent that the knowledge, stories, opinions and pictures that past and present employees have are too great to be captured in a single publication. What is provided here is an impressive initial documentation to mark the 25th anniversary of BLM Alaska Fire Service.

**Maggie Rogers, Editor  
and  
Amber Wilson, Design Intern**

# The origin of Alaska Fire Service

By Bev Fronterhouse

The Alaska Fire Control Service "had established a good reputation as a hard working, competent outfit, undermanned, but getting the job done. The newspapers and others took pride in the 'Alaskan' outfit. This was reflected in the personnel with intense loyalty to the outfit and a total disregard for the long hours worked without overtime pay simply because there was a job that had to be done now!" (Roger Robinson, letter to Tom Owen 1989). This quote typifies the last 67 years of the organization that today is known as the Alaska Fire Service (AFS).

Established on July 1, 1939, under the USDI, General Land Office, the Alaska Fire Control Service's (AFCS) mission: The detection and suppression of wild forest and range fires on the Public Lands in the Territory of Alaska. The Fiscal Year 1940 appropriation was \$37,500.

Roger Robinson assumed responsibility as Chief Forester in the mid-1940s.

Later Robinson recalled, "AFCS was an interesting outfit. We started from scratch with very little money, no knowledge of details or scope of the problem, except that it was big... Operational decisions were made in Washington D.C., a six hour time difference. So we set up our own operational manual, developed our own forms and went to work! I believe it was 1947 when the GAO made its first audit and was shocked at our free wheeling. However, they only found one travel voucher mistake..."

AFCS played a significant role in the evolution of what later became the State of Alaska in 1959. The present roadside campground system, now operated by the State, was started by the AFCS in 1942 in an effort to prevent fire starts. The year 1943 brought a new face to the AFCS. Disillusioned by the high pressure of his East Coast news media position, "Bill Wallace grabbed his wife and came to Alaska to get away from his old job, restore his health and live the quiet life"

(Roger Robinson, letter to Tom Owen 1989). Bill joined the AFCS staff in public relations. His weekly article in the Alaska Newspaper was devoted to wildlife or fishing, and the final paragraph urged care with fire. With the advent of the highway system, especially



3 1/2 Mile Airport Road . . . The old home of the BLM Fire Program.

the Alaska Highway, Bill felt travelers would need a directory of roads and places to stay. The AFCS developed a line drawing of the road system and a series of box ads for the various roadhouses. Bill included the AFCS logo and fire messages on the "Map." After World War II, Bill left the AFCS and went into business publishing "The Milepost."

In the early days of the AFCS, many cooperative agreements were established to accomplish what was an overwhelming task spanning an enormous geographic area, 225 million acres. The most significant cooperator in the early days was the U.S. Military, providing soldiers, supplies and aircraft in support of fire suppression operations. These cooperative agreements were unique to Alaska. Their utilization signified both the limitations and resourcefulness of the AFCS.

1947 brought significant change to the AFCS. With the establishment of the Bureau of Land Management (BLM), a combination of the General Land Office and the Grazing

Service, the AFCS became the BLM Division of Forestry. The loss of the AFCS identity was a very difficult transition. Further reorganization took place in 1957 with greater delegation of authority given to the District Managers. "At that time, I was designated

Area Fire Control Officer with natural resources management and protection responsibilities together with radio communications and aircraft units assigned to my office in Anchorage" (Roger Robinson, letter to Tom Owen 1989).

Through the Statehood Act of 1959, 104 million acres of BLM land was allocated to the State of Alaska. The BLM, Division of Forestry and the State of Alaska, Department of Natural Resources (DNR) entered into their first "Protection Agreement." This agreement defined the role the two entities would play in providing fire protection on Department of the Interior and State lands in Alaska. Today, BLM AFS maintains this same contractual agreement with the State of Alaska for fire suppression across the entire state with

the exception of United States Department of Agriculture Forest Service lands. Unlike the contiguous states, where mutual aid agreements with land managers determine responsibilities, this contractual agreement enables the division of suppression responsibilities along geographic, not political, boundaries. The tactical resources of both the DNR and AFS are tailored to meet those needs, remote versus roadside.

Economic development, innovations, and research of the 1950s, 60s and 70s determined the Alaska Fire Service organization established in 1981. More emphasis was placed on balancing ecological benefits, resource protection, and the cost of suppression. The value and impact of prescribed burning was debated. Unprecedented population growth (44%) in the 1940s had increased fire potential as land was cleared and burned for home construction.

See HISTORY, page 4

The BLM Aviation program was first established and developed in Alaska with the acquisition of the BLM Division of Forestry's first plane, a Cessna 170. The use of smoke-jumpers, chemical retardant, detection flights, helitack and Emergency Firefighter crews were introduced into the Alaska fire program. These resources continue as a vital asset in wildland fire management efforts in Alaska.

The success story continues: In 1961 when the BLM Area Administration moved from Juneau to Anchorage, Roger Robinson became the BLM Alaska State Director. Then, "in 1965, I was tapped to go to Boise, Idaho, to establish what later became known as the Boise Interagency Fire Center. In effect, I was being asked to establish in the 'Lower-48' the same type of unified, all-agency fire control operation that I had established in Alaska." (Roger Robinson, letter to Tom Owen 1989).

The development of technologies in the 1980s continues to enhance the statewide wildland fire management organizations today. The introduction of lightning detection, owned and maintained by AFS, Interagency Remote Automated Weather Stations (RAWS), and a variety of fire detection technologies assist Fire Management Officers in daily suppression, fire management and tactical decisions.

The signing of the Alaska Native Claims Settlement Act (ANCSA) in 1971, and the Alaska National Interest Lands Conservation Act (ANILCA) in 1980, resulted in the distribution of additional BLM lands in Alaska, along with resource and fire management responsibilities. Re-establishing suppression responsibility in 1982, Executive Order 3077 was signed to "provide interim Department policy for a consolidated wildfire suppression effort on Departmental and Native Lands in Alaska (Section 1). The BLM maintains the Department of the Interior wildfire suppression organization in Alaska (Section 1 (b))."

Today, AFS continues fire management services on behalf of the Department of the

Interior, Alaska Native Corporations, the State of Alaska, and the Military- in selected areas, on a contractual basis. This Interagency responsibility covers over 192 million acres. Working closely with Land Managers, through the Alaska Wildland Fire Coordinating Group, AFS staff strives to maintain that reputation forged decades ago as the hard working "Alaskan Outfit," getting the job done.

### Manager's Message

I applaud the employees of the Alaska Fire Service for 25 years of outstanding service to the Alaska wildland fire community. In this time, the employees have participated in an evolution of strict wildland fire suppression process and procedure, to a concept of managing fire on the landscape.

This progression in management has incorporated fire planning, fire ecology, fuels management and information technology into the Alaska Fire Service organization to provide a better understanding to land managers of the importance of fire in the boreal forest.

I challenge the current and future employees to continue to seek new ways to provide assistance to land managers in meeting their land use plan objectives.

- Scott Billing

Many factors contribute to Alaska's fire seasons. Years when a large number of acres burn are due to a combination of dry weather and ignitions from lightning strikes that result in large, long-lasting fires.

Year	# of Fires	Acres Burned
1982	283	70,800
1983	451	98,200
1984	455	115,900
1985	261	372,200
1986	396	395,200
1987	264	166,800
1988	602	2,134,600
1989	485	68,900
1990	932	3,189,400
1991	760	1,668,000
1992	472	150,000
1993	869	713,100
1994	643	265,700
1995	421	43,900
1996	724	599,200
1997	716	2,026,900
1998	413	120,800
1999	486	1,005,400
2000	369	756,300
2001	351	218,100
2002	544	2,184,600
2003	476	602,700
2004	701	6,590,100
2005	624	4,663,900
2006*	304	270,600

Prior to 1988, figures listed are AFS protection totals only. 1988-2006 are statewide figures.

\* Final Numbers Not Available



B-25



Bell 47



Commander

## Aviation changes to meet demands

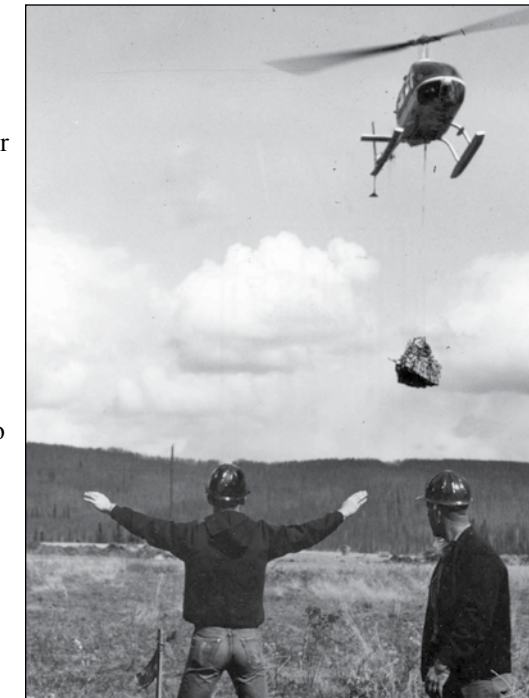
By Chip Houde

In the Lower-48, aviation resources play a major role in fire management. Tactical aircraft including helicopters, air tankers, air attack/ lead planes, and jumpships augment ground resources in suppression efforts. For AFS, however, the job of preparing for and responding to wildland fires could not be accomplished without tactical and non-tactical aircraft.

The list of heavy fixed-wing aircraft used over the years for Alaska's suppression efforts (including retardant drops, paracargo delivery, and supply transport to remote areas) would make an excellent roster for an aviation museum. From the Grumman TBM, B-25 Mitchell, B-26, C-119 Flying Boxcar, C-123, PBX, and the Argosy, to the more recently used PB4Y-2 Privateer,

C-130 Hercules, and the KC-97 Stratotanker. Today, CL-215 medium water-scooping aircraft are contracted as structural integrity concerns have limited the Federal agencies' usage of the older retardant planes.

Lighter aircraft also changed as quicker initial attack response times were desired. The DC-3 and Grumman Goose, originally used as jumpships, gave way to the Volpar, Shorts Sherpa, and Turbine DC-3. Used today are the Dornier 228, and the CASA 212- with its rear-door medium paracargo and crew carrying capabilities that give AFS a versatile tool.



Helicopter being directed to drop off cargo.

AFS Fire Operations pioneered the "dual role" concept of aerial supervision. The OV-10 Bronco was staffed with both a lead plane pilot and air attack boss, which became a combination now used nationwide (with a variety of other aircraft) as the Aerial Supervision Module. Other non-tactical aircraft such as the DC-6, Shorts Skyvan, Twin Otter, AeroCommander, and Cessna 208 Caravan have long supported the AFS mission to transport passengers and cargo to airstrips from the Canadian border to the Seward Peninsula, and from the Kenai Peninsula to the North Slope.

Helicopters have played a vital role in both initial attack firefighting and in fire support. Light helicopters (such as the Bell 47, B-206, BO-105, and Eurocopter AStar 350) and medium helicopters (including the Bell 204, 205 and 212, and the Sikorsky S-58T (the "Beluga")) have delivered firefighters, supplies, and performed bucket work to aid firefighters on the ground. Aerial firing missions using Plastic Spherical Dispensers (commonly called "ping-pongs") and helitorches continue to have an important role in fire suppression and prescribed fire in Alaska.

Since the time AFS was conceived (some say on cocktail napkins at the Fairbanks Inn), forward thinking leaders like Al Dunton, Jim Ward, Bill Bowles, Ron Dunton, and Dick Erickson assured that the role of aviation at AFS would take a progressive course into the future of firefighting, and it has.

### ALASKA FIRE SERVICE MANAGERS



GERALD TIMMONS  
1982 - 1983



ROGER TRIMBLE  
1984 - 1986



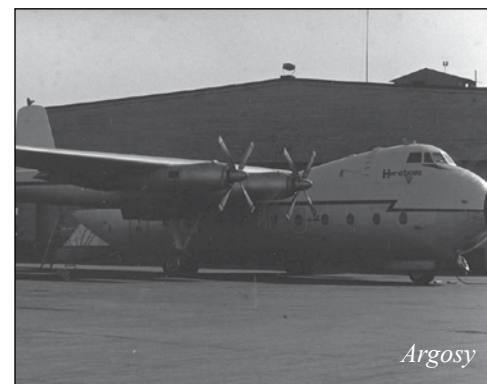
TOM OWEN  
1986 - 1989



GENE SCHLOEMER  
1990 - 1993



SCOTT BILLING  
1994 - 2007



Argosy



Grumman Goose



CL-215

# Can you hear me now?

By Ken Kokjer  
Based on historical notes from Steve Iverson, who worked in the radio shop starting in 1977.

Prior to the formation of AFS in 1981, the fire program in the BLM District Office was active in developing communication systems. By 1977, a few repeaters were in operation. These consisted of two hand held radios with interconnect harnesses, powered by huge air cell batteries. One site had propane power, but an accident involving a helicopter delivering/removing propane tanks led to a directive to explore alternatives. By 1979, the fire program had the first solar powered systems in common use in Alaska. About that same time, General Electric developed their Flatpack repeaters, designed for ruggedness and low power. By the time AFS was formed, there were installations on about nine mountaintops across the Interior.

Over the next decade, a variety of technologies were installed on mountaintop sites with varied success. Power sources have always been a problem because of the remote conditions. AFS has experimented with wind and diesel generators, in addition to the solar arrays at all sites. By 1990, radios made by Daniels Radio in Canada finally provided reliable, low power units that were easily transported mountaintop systems. They are now installed at all sites and work very reliably with a properly-sized battery system that is charged by solar panels.

For the last ten years, the fire radio system has been quite stable, with radios on twelve mountaintops as well as all base locations.

At this time, there are over 70 transmitters in the system (including ultra high frequency links between sites). The AFS Radio Shop maintains all these, plus other sites belonging to the Fish and Wildlife Service and National Parks Service through the Interior Wireless Communications Group cooperative agreement. The Radio Shop also maintains Remote Automated Weather Stations (RAWS) for AFS and other agencies (see story about RAWS page 5).

Hand held radios have evolved, also. They have gone from 16-channel, wide band radios to 256-channel, narrow band radios that are capable of digital operation.

AFS has also experimented with satellite communications in various forms, from a transportable three-meter dish system to suitcase and notebook computer sized units. All these operate through geosynchronous satellites and share a common problem. In Alaska, the line of sight to these satellites is only 10°-15° above the southern horizon, which means a large hill to the south can block the signals. Where that view is not blocked, these systems work fairly well, but they are still bulky and need careful aiming when being set up.

In late 1998, a new satellite system, Iridium, became available. Terminals for Iridium are hand sets, much smaller than anything previously available. Iridium is a constellation of 66 satellites in low earth orbit, which does not have the visibility problems associated with geosynchronous satellites. AFS and the Fairbanks District Office were involved in beta testing during the winter of 1998-1999 which proved very promising. In the spring

of 1999, when commercial service began, the selected AFS beta tester, Ken Kokjer, bought 15 phones to spread around BLM-Alaska for field use. As BLM employees took these to the field, they were enthusiastically endorsed – so much so that by the end of the summer, offices all over the state had procured an additional 35 phones. Use has grown steadily, and today BLM has over 300 Iridium phones statewide of which about 125 are at AFS.

All AFS field units now travel with Iridium phones. Smokejumpers have one phone per pair. Fire crews carry one or more. Radio technicians travel with one, to be assured of contact with base when servicing remote sites. Most aircraft are now equipped with Iridium based tracking equipment (see story on Automated Flight Following), and some have the ability to make phone calls while in flight.

Prior to Iridium, it was estimated that the entire radio system (fire and resource) covered no more than 1/3 of the Alaskan area in which BLM operates. Iridium phones cover the entire area at comparable or less cost than the annual maintenance of those radio sites. Our resource partners have so thoroughly adopted Iridium phones for field use that they have shut down three of their radio systems around the state, eliminating 11 remote radio sites. AFS continues to evaluate satellite communications as replacement for terrestrial radios where appropriate.

# Fire Dispatch: From manual to digital

By Linn Clawson

The essential components of fire dispatching have changed little over the years: fires get reported, resources get sent to fires, fires eventually go out, resources leave, paperwork gets done. However, evolving technologies influence how the basics get done and, occasionally, dispatchers influence the shape these technologies take. Changing relationships between humans and the land, especially as demonstrated by government agencies and private land owners, also has influenced what fire dispatchers do and how they do it. The simpler world of fire in the 1970s and earlier has become more complex at the start of the new millennium.

In all but the least populated rural communities, dispatch offices now have telephone links with most individuals. Fire personnel no longer have to fly to a community to find out if a fire crew can be mobilized, and residents of a rural community can now call dispatch offices to report a local fire. Satellite phones put dispatch offices in touch with aircraft and field personnel in even the most remote parts of Alaska. Firefighters and other agency personnel can telephone dispatchers with support requests, ask for help in an emergency, or facilitate aircraft flight-planning and flight following.

The evolving, interconnected digital world links users with each other and with databases and services that aid communications as well as data collection, collation, and publishing. One thing that has not changed in principle is the teletype. The mechanical teletype of the past was faster than surface mail, but offered a very limited long distance printed electronic communications capability. In the



Above: Version of the mechanical teletype. Below: Early dispatch days.

past, compiling and filing the daily fire situation report, one of multiple tasks completed by dispatchers, could take one or more people a full work shift to file via teletype. Today the reports are filed within a matter of minutes online and the modern teletype is linked via computer.

The fire dispatch office of the past had its technological limitations, but was a pretty simple and straightforward operation compared to now. BLM was basically the only agency involved; land ownership was less of an issue before the Alaska Native Claims Settlement Act and the Alaska National Interest Lands Conservation Act, and the transfer of lands to the state; and telecommunications technologies were more primitive and available on a very limited basis. However, the fact that dispatchers today have a far more difficult world to deal with does not mean the dispatchers of earlier times had an easy job. The job was simpler but was done with fewer



and less sophisticated tools. They were as accomplished and competent in their world as are today's dispatchers in theirs; a few, in fact, have managed to step from past into the present before the end of their career.

# Firefighter Safety is the #1 Priority



# Remote Automated Weather Stations

By John Palmer and Keith Pollock

A Remote Automated Weather Station (RAWS) is a self-contained, solar and battery powered unit which collects weather data and then transmits that data via satellite to a collection point on the East Coast of the United States. RAWS can be deployed virtually anywhere in the world. Because of these characteristics, they are a valuable tool to fire organizations, especially in Alaska where there are vast remote areas with little or no means of weather data collection.

The standard complement of sensors includes: precipitation, wind speed, wind direction, air temperature, fuel temperature, barometric pressure, and wind gust (which is the highest wind speed and the direction it was from within the previous hour). Additional sensors,

such as snow pillows and soil moisture, may also be installed.

Data from each station in Alaska transmits to a satellite, which relays the data to the downlink site at Wallops Island. After the initial processing, the data is again transmitted to a satellite and made available to users. AFS obtains the Alaska data electronically from a computer at the National Interagency Fire Center (NIFC). NIFC is a downlink for over 2,000 RAWS, most of which provide weather information for the fire community.

**1982** There were six RAWS in Alaska. Access to the data was via dial-up using an acoustic coupler (telephone receiver inserted into two rubberized receptacles) at 300 bits/sec. The data was then printed out using a printer with thermal paper. Data was primarily used by the National Weather Service (NWS) to provide daily fire weather

See RAWS, page 6

# The Evolution of Fire Ecology

By Randi Jandt

In 1981, the USDA Forest Service Institute of Northern Forestry spearheaded fire-related research and studies in Alaska. Research Forester Rod Norum was trying to figure out which of Anderson's 13 Fuel Models might work to predict fire behavior in black spruce. Melanie Miller, BLM's Fire Ecologist, was assisting with the development of statewide Alaska Interagency Fire Management Plans (AIFMP).

Authors of the AIFMP were not allowed by BLM policy at the time to mention it, but they were beginning to recognize the benefits of allowing fires to play their normal role in the fire-adapted boreal ecosystem. The main focus of the AIFMP was on minimizing cost and resource damage. An account of acres of "timber" lost was included in each fire report. The evolution in thinking about fire management in boreal ecosystems continues today.

In 2006, the benefits of maintaining fires in the ecosystem outweigh almost everything except loss of life and property for most land managers. Research has provided more information to help understand fire regimes in Alaska. For example, we now understand that climate and summer weather conditions determine the size of a given fire season. Factors such as "greenness" and over-winter snow pack, which are so important in the Lower-48, have little bearing on Alaska's fire season severity. We are also starting to understand that our fire regimes are moving targets and may well be changing before our eyes. Summers

in Alaska are getting warmer, longer and drier—a change which began to accelerate about 25 years ago, according to climate records. Average summer temperatures in Fairbanks are now roughly 5° F warmer than they were in 1925.

In 1981 we figured on a "big" fire season every 11 years or so. Now in 2006, with four seasons over 2 million acres burned in the last decade, AFS needs to be ready for more frequent large fire seasons. Studies conducted with the University of Alaska Fairbanks and other universities point to a legacy of even-aged forest stands created by extensive burning at the turn of the century when new settlers used fire on the landscape for mining, exploration, land clearing, and sometimes by accident. Fire suppression starting in the 1950s has helped maintain these fuels, which are now ripe for burning.

In contrast, BLM's range monitoring studies, which began in 1981, now show that several treeless tundra areas of the state have been impacted by fire and caribou grazing such that the old-growth lichen stands that help support caribou herds through the winter may be in short supply. With changes in climate and fire regimes stacked against the forage lichens, managers will have to decide if remaining habitats deserve elevated protection levels.

In summary, fire management has evolved substantially in the last 25 years, partially due to a new understanding of boreal fire ecology. The next 25 years may be a period of increased fire activity due to a warmer climate. Managers will have to make important policy decisions about fire management in a dynamic ecosystem.

RAWS, from page 5

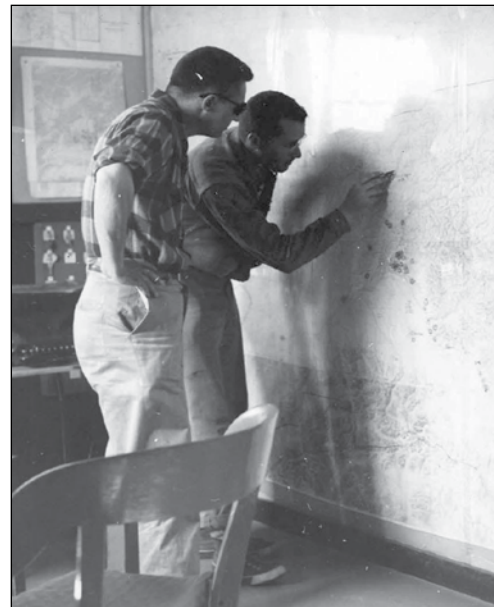
briefings to fire managers.

Over time, as the network of stations grew and the access to data became less cumbersome, fire managers and staff realized that the RAWS are a useful tool.

Today AFS coordinates the installation and maintenance of 129 RAWS stations owned by State and Federal agencies. Participating agencies include BLM, NWS, the National Park Service, Fish and Wildlife Service, USDA Forest Service and the State of Alaska Department of Natural Resources.

Weather data can be viewed by any web-user at the AFS external website:

<http://fire.ak.blm.gov>.



Although technology has changed, maps continue to play a vital role in AFS' mission.



## Names of the Past

- Alaska Fire Control Service (1939-1947)
- Division of Forestry (1947-1970)
- Division of Fire Control (1970-1977)
- Division of Fire Management (1977-1981)
- Alaska Fire Service (1981-Present)

# Automated Flight Following (AFF)

By Ken Kokjer

Automated Flight Following, or AFF, is an example of the constant evolution in technology tested and used by AFS. Department of the Interior (DOI) and the U.S. Department of Agriculture regulations require that all non-scheduled aircraft flights carrying government employees must regularly be in contact with someone who has responsibility for following that flight.

Most DOI and USDA agencies in the Lower-48 implement this by requiring radio contact every 15 minutes, and in Alaska it is commonly increased to 30 minute intervals. It has been estimated that the 190,000 hours of flying by USDA FS and DOI agencies required the equivalent of three to four full time positions just to move the location information from the aircraft to a pad of paper on the ground. In 2001, an interdepartmental effort was initiated to automate this activity. About the same time, Ken Kokjer, Telecommunication System Planner for AFS and FDO, was tasked to explore the same issue for AFS. Through the Alaska Interagency Aviation Working Group, Kokjer became a part of the national development team.

The system that has developed consists of three major components: 1) Equipment installed in the aircraft to capture GPS coordinates and transmit them via satellite 2) A server system in Boise that receives the



Screen capture of WebTracker image from (date). Tag colors represent status: black = parked at airport; gray = parked off airport; yellow = currently reporting; red = was reporting, but no reports within last 15-45 minutes.

position reports, stores them in a common data base, and makes them available to users 3) WebTracker, the user interface software which runs on any standard personal computer. A growing number of commercial vendors provide the equipment for the aircraft

and the satellite links. The server software and the user interface software are modifications of a system which had been in use by British Columbia Forestry. The US and Canadian developers have worked as a team since 2003 to further developments for both systems.

Users see a relatively simple mapping interface, with each aircraft shown as a small diamond icon and an ID tag. Users can select from a variety of overlays to help with location definition and basic tools allow focus on specific geographic areas. The icons move over the map as position reports arrive from the aircraft. Tag colors represent status, as shown on the snapshot screen of a typical day in Alaska.

AFS became a test site for most of the offered equipment and services because of Alaska's remoteness and the technical support available. Even though the system is not complete and is used provisionally, by the start of 2006 season, over 600 aircraft were equipped with AFF installations nationwide. Roughly ten national and state agencies are active users and several thousand individual end user IDs are active. Initial development is expected to be complete within one to two years. Thus, AFS has once again been instrumental in advancing technological solutions to operational problems.



A sand table training session conducted in 1956.

# Fire Service Barracks



By Maggie Rogers

The new AFS barracks on Fort Wainwright was dedicated in July of 2005. It marked the completion of one of the Department of the Interior's largest fire facility projects in recent years. According to AFS Manager Scott Billing, "It [was] a long process getting the facility established, not only for the folks that work for AFS, but also for all the fire communities in the Lower-48 that come to Alaska to help us accomplish our mission throughout the summer." The facility houses personnel and firefighting crews from Alaska and the Lower-48 from mid-February through mid-November. The old barracks, previously used for personnel housing, dated back to the 1940s.



Top: The old barracks, built in the 1940s. Above: The new barracks which were finished in 2005 provided housing for firefighters and other personnel the past two seasons.

FSS, from page 13

develop qualifications. The 1990 Alaska fire season was, at the time, the third largest fire season on record. As a result, management again identified a need for additional FSS. There were approximately 34 FSS positions between 1991 and 2003, ten assigned to the specific Zones, and 24 in the general Fairbanks pool. Also during those years, numerous individuals from the Lower-48 detailed to the FSS pool as Fire Specialists and Helicopter Managers. In order to more accurately reflect the varied demands of the Fire Specialists to included their importance to non-suppression related fire uses, the Fire Suppression Specialists changed their name to the Fire Specialist Section (still referred to as FSS) in 2001. AFS currently employs 20 FSS who are based in Fire Operations on Fort Wainwright, and six FSS based in the Zones during the field season (typically from the first of April

to the end of September). They continue to be a primary pool of highly trained personnel experienced in fire suppression, aviation operations, and hazardous fuel reduction for use in Alaska and the Lower-48. The FSS also provide training developers and instructors in fire operations and aviation management, and manage the Emergency Firefighter (EFF) Helicopter Crewmember Program which was started in 1998. Today's FSS primarily staff extended attack fires within Alaska, but during high fire activity they also respond to initial attack fires. Typical fire assignments include: Firefighter, Strike Team Leader, Task Force Leader, Division Supervisor, Crew Representative, Incident Commander, Helicopter Managers and other Miscellaneous Aviation Operation positions. Some FSS fulfill positions on Type 1 or 2 Teams and Type 3 Organizations. They commonly fill details to the Lower-48 or are deployed to extended fire assignments.

# Lightning Detection

By Bev Fronterhouse

Alaska Fire Service owns and maintains the Alaska Lightning Detection Network (ALDN). Working with the scientific community, the prototype was installed in 1976. Currently, nine ALDN sensors are located throughout the state, with two additional sensors scheduled for implementation by Spring 2007. AFS and Environment Canada (EC) have entered into an agreement for the exchange of lightning strike data from sensors along the Alaska-Canada border, which produces more accurate lightning strike locations. It works by each sensor time stamping the flash report with a clock synchronized to the GPS satellite system. Data collected from the sensors is transmitted via land line and the wide area network to the Position Analyzer (APA) located at AFS. The APA groups flash reports from Alaska and Canada based upon the time stamp and produces lightning strike locations. This data is correlated and stored in a database. The AFS IMS Website utilizes the lightning database, along with other spatial data, in the creation of real time lightning displays referenced to plan fire detection flights and resource pre-positioning. These lightning maps are used by the Interagency fire community at large. AFS also provides lightning strike locations to the National Weather Service to use for their fire weather forecasts.

While not on fire assignment, FSS may perform project work such as: prescribed fire, fireline equipment development, aviation mission planning, training coordination and support, and instruct fire and aviation courses.

The FSS program remains unique to Alaska as this sort of single-resource program does not exist anywhere else.



# Falling from the sky



Smokejumper practice jump with a round parachute.

By Marty Meierotto

Leonardo da Vinci is credited as being the first man to envision a way of getting a person to fall safely to the ground from the sky in 1495. This early notion was the seed that produced what has become the art of parachuting, and ultimately the branch of firefighters known as the smokejumpers. The first parachutes were crude, basic and nothing more than a large umbrella that slowed a falling human's descent rate to a survivable speed. Since more recent history when the Wright brothers developed the controllable wing, the airplane and the parachute have been inseparable.

The smokejumping concept started when firefighting officials recognized the need for immediate action on the nation's many inaccessible, lightning-caused wildland fires. The first suggestions to use parachutes as a means of reaching fires were rejected by the USDA Forest Service. As aircraft became advanced and depended upon for fire suppression, it became apparent that parachuting was logical and feasible. In 1939, Forest Service Officials allowed experimental tests, which were successful, and the smokejumper program was born. The term "smokejumper" seems to be derived from "smokechaser," a name given to

those that responded to wildfires by road. On July 12, 1940, the first fire jump was made. Rufus Robinson and Earl Cooley jumped from a Travelair into the Nez Perce National Forest near Marten Creek. Since that day, the smokejumper program has grown into a major part of the initial attack firefighting force in the U.S.

**"The first parachutes were crude, basic and nothing more than a large umbrella that slowed a falling human's descent rate to a survivable speed."**

The 1957 fire season was particularly bad; air traffic which served as the life line for remote villages was hampered by smoke. The need for quick, aggressive initial attack on fires was recognized and parachuting was the only logical, cost effective choice.

Smokejumping began in Alaska in 1959. A rapid response time by the smokejumpers and pilots, coupled with fast aircraft, would be the key to suppressing fires while they were small. Smokejumpers from the Lower-48 were recruited, trained and sent to Fairbanks. A jumpbase was not yet constructed but they improvised. A DC-3 was obtained from the U.S. Fish and Wildlife Service and stationed at Ladd Air Force Base on Fort Wainwright. On June 2, the first fire was jumped by Squad Leader Hans Trankle and five smokejumpers. In all, 164 fire jumps were made the summer of 1959 and the program was a success.

As the Alaska smokejumper numbers grew, it became evident that the individuals who

See JUMPERS, page 8

## Recollections of the Past

"Even as late as 1985, AFS was still essentially uncomputerized or automated at most of the operational levels. The first computers for general use (very limited) were the WANG's! In 1986 Apple II SE's started appearing, but it wasn't until the early to mid 90s that even the outline of the forms of what you see now started to emerge."

- Pat Houghton  
Intelligence Officer,  
Retired

"The GS-4 was a teletypist position which has now been replaced by a computer system. Everybody now has direct access to the teletype system, rather than having to pass messages to a teletypist who types them on the one machine that was then available."

- Don Barry  
Intelligence Coordinator,  
Retired

"There have been great leaps in communication from the field. Not only does everyone have a radio, there is rarely a day when a fire wouldn't have contact with dispatch. It used to be when you were out on a fire you were really out and away from it all. Now the distance to dispatch has been shortened."

- Sandy (Ahlstrom) Romero  
First Female BLM Rookie Smokejumper,  
Retired

"There were many changes over the 24 years of my tenure. There was a paradigm shift from fire control (suppression) to fire management. From using every available resource to contain every fire possible, to a more realistic approach of suppression based upon the resource values at risk and resources at hand."

- Kathy (Barker) Cullings  
Chief Division of Information Systems,  
Retired

gravitated to the program were the self-motivated types who liked to work effectively and efficiently, something that has not changed. Alaska smokejumpers are a leading force among smokejumpers as they bring innovative ideas to the program in addition to an understanding of rugged and remote terrain and fire experience. They have adopted the highest physical fitness standards in the nation. Never satisfied with the status quo, their constant research and developments have won them the highest respect of their peers.

By the late 1970s, the round parachute had gone through many changes as the smokejumper lofts, both in Alaska and the Lower-48, continued to improve canopy performance. Always looking for more forward speed, maneuverability, and better landings, the Alaska smokejumpers realized that they had maximized the round canopy performance. Jim Veitch, Matt Kelly and Ron Lund began looking at a new canopy design called the Ram-air or square parachute. Al Dunton, who was then the smokejumper project leader, was very receptive to the new idea and encouraged testing the squares.

The radically new square parachute was designed in the mid sixties. It was the brain child of a kite maker, Domina Jalbert. Blending the properties of the existing parachute and the airfoil, he created a wing made out of fabric that the operator could actually pilot. The wing's leading edge was open and scooped the air as it fell through the sky, pressurizing the fabric into a relatively rigid

wing that created an airfoil. Descent rate and steering were controlled by toggles attached to the trailing edge of the canopy. These toggles could be pulled to full arm extension on landing to "flair" the canopy, converting airspeed to lift and creating an unbelievably soft landing. The new design already had the world of sports captured and its use allowed numerous new possibilities for smokejumpers. More forward speed meant that jumps could be made in higher winds. The superior maneuverability gave smokejumpers the ability to more accurately select a landing area and avoid obstacles in the hazardous environment into which they jumped.

Adapting to the square canopy was a challenge and there were many questions, not to mention the current deployment system used for sport was unacceptable to firefighting standards. The speeds at which the smokejumper aircraft flew were far greater, and most of the canopies available were too small and high performance for a smokejumper with heavy gear. The deployment problem was solved by adapting a Russian-designed system which used a small static line deployed chute, called a drogue, to stabilize the jumper when exiting the aircraft. Through work with a parachute manufacturer, the new parachute was larger, more stable and easier to control. The design and testing that went into the project was monumental. The final product was labeled the BLM-A parachute system, conceived, designed, and developed solely by the Alaska smokejumpers.

On June 21, 1982 near Selawik Lake, Veitch as Jump Master (now called Spotter) kicked

eight men out of an airplane near a fire. All eight jumpers were wearing the new BLM-A parachute system and were dropped in one pass with no wind indicators thrown. It was the first fire jump in U.S. history with the square canopy. As years go by, the system continues to be refined and perfected to fit the changing aircraft and needs of the Alaska smokejumpers.

Today the Alaska smokejumpers also maintain the largest non-military paracargo operation in the world. The paracargo operations supply fires with a vast array of equipment, using parachutes that range in size from 20-foot small canopies to 64-foot canopies that will handle 250 gallon fuel bladders.

Smokejumpers are also a pool of highly trained personnel for large extended attack fires, supplying strike team leaders, division supervisors, Type 3 Incident Commanders, and various other positions within the Incident Command System.

There are currently 68 AFS smokejumper positions and four jumpships during the fire season, and the jumpbase is still located at Fort Wainwright. The jumpships have changed over the years, but at present the Casa 212 and the Dornier 228 serve as the crew work horses. They can carry eight smokejumpers and enough gear and equipment to battle a small initial attack fire for three days. All smokejumper parachute training and equipment construction are done in-house and a high degree of physical fitness is maintained by all. Parachute and related gear improvements continue as the ever changing world of the initial attack firefighter moves forward.

# Emergency Firefighter crews

By Ken Coe

The origin of the Alaska Emergency Firefighter (EFF) program is a classic example of supply and demand economics. Wildland fire suppression requires large labor forces on short notice, which may only be needed for brief periods of time. Native villages throughout Alaska constitute an under utilized, but relatively stable workforce due to the scarcity of local cash employment opportunities. When organized fire suppression first expanded into Alaska's remote areas (1942), village residents were usually the only available workers. In addition, they were adept at living and working in the Bush environment.

The village firefighting community rapidly gained experience over the next 20 years. EFF crews drawn from these small villages had inherent team cohesion due to the intimate familiarity of lifelong friends and neighbors. In 1960, BLM began providing a modest amount of pre-season training in selected villages. Training gradually increased over time. Recognizing the natural advantages of cumulative experience, familiarity with the Bush environment, and built in crew cohesion, BLM established policy by the late 1960s to hire village crews first, even for fires in close proximity urban areas. Alaska EFF crews were first used outside of the state in 1967 when a number of crews were mobilized to Montana to assist with extreme fire activity. Continuing Lower-48 requests for crews and expanding needs at



Members of an Emergency Firefighter Crew.

home resulted in the first steps to formalize the Alaska EFF program in 1970. Alaska initiated an aggressive helitack program the same year to improve initial attack effectiveness on new fires. Most of the eight person helitack crews were drawn directly from the regular village EFF crews. By 1974, Twin Otters had become the most common fixed-wing aircraft available for crew transport. Crew size was standardized at 16 (including one crew boss and three squad bosses) based on the Twin Otter passenger capacity and the ability to split one crew evenly into two helicopter loads.

The Interagency EFF Crew Management Guide in current use evolved from the 1980 BLM Alaska Emergency Firefighter Crew Policy. It was first published as an Inter-

agency handbook in 1985. The guide is reviewed and republished biannually. Other than increasing qualification requirements, there have been relatively few changes in the past 22 years. Today's annual requirements for EFF include refresher training, the work capacity test, and additional training for crew bosses, squad bosses and chain saw operators. Alaska Division of Forestry and BLM Alaska Fire Service currently sponsor EFF crews in nearly 50 communities across the state.

Alaska EFF crews continue to contribute to national wildland fire suppression needs. This season, not including in-state assignments, 55 crews were mobilized for wildland fires outside of Alaska, starting in July.

*"I think Boats (Tom Boatner) was spotting, flying over the Valley of 10,000 Smokes, on our way down to Mitrofina Bay along the Aleutian Peninsula. Clearly, the fire had started at the fishing cabin on the beach and had rapidly spread in the thick matted dried beach grass. When my canopy opened up, I looked down and saw the sea lions floating in the water below. Then right there, there was a bald eagle flying below my canopy level. Truly an outstanding moment."*

**- Sandy (Ahlstrom) Romero  
First Female BLM Rookie Smokejumper,  
Retired**



Sandy Ahlstrom looks out the airplane window on her way to the last fire she jumped before her retirement in 1997.

# The unique role of the FSS in Alaska

By Ilene Penas

Following the record 1977 fire season in Alaska, management identified the need for trained mid-level fire overhead. The following year, a Fire Specialty Unit (FSU), stationed on the Kenai, was born in the Peninsula Resource Area. The FSU was made up of individuals with a generalized background in fire who could fill specific overhead positions as well as perform initial attack via helitack, roadside, or hand crew. The original FSU was composed of approximately ten members.

In 1980, the FSU program became known as the Alaska Smoke-chaser Project. It was expanded to approximately 20 members with four leaders and one manager. Recognized as a statewide-resource the personnel responded to fires throughout the state.

The following year the Alaska Smokechaser Project was expanded to approximately 30 members and moved to Fairbanks where

there was more fire activity. It existed under the Fairbanks District Office, but continued to be a statewide resource.

In 1981 the entire Federal Fire Management of Alaska was reorganized under a statewide set up and the Alaska Fire Service was born. The Smokechasers became the Fire Suppression Specialists (FSS) in 1982 and their numbers were reduced to 20 people. At this time the FSS acquired the firefighting responsibilities of the Chena Helitack and Roadside Firefighters, which have since been disbanded. Approximately 30 individuals were detailed up from the Lower-48 during the hottest part of the year for a total of about 50 FSS, with two managers and six leaders.

In 1986, the Fire Familiarization Program (FFP) was started and run by FSS until 1992. The FFP was intended to provide an opportunity for non-fire BLM personnel to participate in the fire program on a planned basis, and to allow them to become familiar with fire suppression operations so they could gain fire experience and

See FSS, page 14



- 2002**
  - Statewide 2M acres burned; 1.4M in AFS protection
  - Seven Type 2 incidents within Alaska
  - Alaska Type 1 Team responded to three incidents in the Lower-48
  - 52 Type 2 Emergency Firefighter crews used on fires within Alaska; 25 crews were dispatched to the Lower-48
  - August 4 to 7 Preparedness Level in Alaska was 5
  - Milepost 78 fire ignited on May 23; on May 26 wind drove fire from 6,300 acres to 35,000, by May 28 the fire was 84,000 acres— fire declared out on October 8 at 115,000 acres
  - July 15 to 25— 35,000 lightning strikes recorded; 8,000 were on July 18
- 2003**
  - 10 Type 2 Emergency Fire Fighter crews dispatched to Texas for the Columbia Space Shuttle Incident
  - The highest number of March fires ever recorded (47)
  - Red Flag Warning issued March 12 due to extreme winds and low humidity in Southcentral
  - Three Type 2 incidents occurred in late May
  - Hadweenzic Fire in Upper Yukon Zone was the largest fire of the year, burned 192,000 acres— statewide total acres burned was 603,000
- 2004**
  - Surpassed the 1957 record for the number of acres burned in a single fire season— 6.59M acres burned statewide; 4.5M in AFS protection; 3.3M acres in Upper Yukon Zone
  - Tongass National Forest engines assigned to fires in the Interior – not only the first time the engines were ever used off-forest, but the first time engines were mobilized to the Interior from outside of mainland Alaska
  - The first use of the U.S. Coast Guard’s Mariner Unmanned Aerial Vehicle (UAV) for aerial recon of wildland fire activity in Alaska
  - The peak day for personnel assigned to fires was on July 17 when 2,711 personnel were in the field
  - Smokejumper booster crew totaled 120 persons from Lower-48
  - National Weather Service issued 108 Red Flag Warnings and 50 Fire Weather Watches; 17,000 lightning strikes recorded in a 24-hour period
  - Boundary Fire northeast of Fairbanks raised many public concerns
  - EFF and AD Payroll for AFS and State totaled \$17.2M
  - Series of public meetings held during the fall to discuss the Alaska Interagency fire program
- 2005**
  - 4.6M acres burned statewide— 3.9M acres in AFS protection, 3M acres burn in August
  - New \$17M AFS barracks on Fort Wainwright opened
  - A mid-August upper level high-pressure ridge centered over the state, brought high temperatures and low relative humidities— resulted in significant increase in fire activity
  - Seven Type 2 fires
  - Type 1 Team completed two assignments in support of the Hurricane Katrina recovery effort
- 2006**
  - Lightning detection system upgraded to now include five sensors from British Columbia, Canada
  - Large fire season in the Lower-48, Alaska Interagency Coordination Center sends all resources available starting in July— including 55 Emergency Firefighter crews from the normal rotation list

## From “The Pioneer” All-Alaska Weekly Friday, July 2, 1971

# BLM HIRES 24 WOMEN FOREST FIRE FIGHTERS

## Female Capabilities, Rights to be Tested In BLM Experiment



Photo caption on original article: Left, 26-year-old Dan Rody, crew boss, waits for transportation with his 24 female firefighters. Below, Caroline Peters discusses things with BLM director Bob Krumm.



A 20-year-old Fairbanks woman printer this week made her imprint on the Bureau of Land Management.

Hired by the BLM as a forest fire fighter only to be fired four hours later, petite Caroline Peters was not to be outdone.

She took her case of woman’s rights first to the public through the press, then to a lawyer, and finally she went directly to Bob Krumm, director of the BLM here.

Krumm explained to her that the BLM simply could not hire mixed men and women fire crews since it was not reasonable to provide separated bedding and bathroom facilities.

But he told her if she could get enough women together for an all-woman crew that he would be glad to launch an experiment whether women had the strength and endurance to do the job.

“Although our regular crews number 25, I told her if she could line up 12 girls that it would be worth it to us to carry on the experiment on a temporary basis” Krumm said.

Wednesday night the BLM director was surprised when she turned up with 23 young women, clad in jeans and brogans and field gear— ready and willing to go out as emergency fire fighters.

Another young lady joined the group while an orientation session was under way.

In the session, the 24 girls were introduced to the only male

member of their contingent, personable Dan Rody. It was explained that the girls would be taken by bus out the Elliott Highway to the huge Wickersham Dome fire and then shuttled to their station on Washington Creek.

A large number of press people showed up for the meeting and while still and television cameras clicked, interviews were being taken and so on, one BLM man commented “This thing is getting more attention than the visit of Secretary of Interior Morton.”

Since a large number of fires have broken out in the Interior and the BLM Fire Control Headquarters here has become a beehive of activity, more and more women have been hired for auxiliary jobs. All the gate guards – about a half dozen – are women and there are women utilized in the warehouse operations, dispatch, record keeping, radio and parachute packing. Krumm says the women in these jobs have compiled an excellent record.

But he said that it remained to be seen whether they would do as well in the field on an actual fire He said they would be utilized on a fire after it had been checked – on mop-up activities.

Asked if separate facilities would be provided, Krumm indicated that they would be bedded down in an area reasonably separate from men firefighters and as for restroom facilities, he said the women would have “to use the bushes” the same as everyone else.



### Introducing the 25th Anniversary Logo...

As part of AFS’ silver anniversary, employees were encouraged to submit logo designs to a committee.

The 25th Anniversary Logo will be used with the existing AFS logo from October 2006 - October 2007.

Thanks to all AFS employees who submitted designs!

# Through the Years...

Compiled by Mary Lynch

- 1906** Native Allotment Act created a Bureau of Indian Affairs trust responsibility
- 1939** July 1, Congress authorized the establishment of the Alaska Fire Control Service (AFCS) under the General Land Office
- 1946** Bureau of Land Management is created and absorbs AFCS
- 1959**
- Alaska Statehood Act
  - Smokejumpers based in Alaska
- 1963** Teletype installed in Anchorage Weather Bureau and BLM offices in Anchorage, McGrath and Fairbanks
- 1969** Swanson River Fire (80,000 acres) prompted changes in how to do business
- 1970** BLM received special \$500,000 spending authority to set up initial attack forces before a fire started— helitack crews hired, helicopters contracted
- 1971** Alaska Native Claims Settlement Act (ANCSA) provided cost-free wildland fire protection on land conveyed to Native villages and corporations
- 1980**
- Alaska National Interest Land Conservation Act (ANILCA) changed approximately 100M acres of land managed by BLM to management by National Park Service and Fish and Wildlife Service
  - Alaska Class 1 Team assigned to fire near Thunder Bay, Ontario— first time an overhead team from the US was used in Canada
- 1981**
- **October 16, BLM Memorandum approving creation of AFS as we know it today**
  - Food services opened what is believed to be the first field kitchen at the Dune Lake Fire staging area
- 1982**
- **March 17, Executive Order 3077 recognized the economic and operational benefits through the continuation of the suppression responsibilities of BLM for all Native lands conveyed under ANCSA and DOI-managed lands including Native allotments**
  - AFS operational and headquartered on Fort Wainwright
  - Alaska Interagency Fire Management Plan, Tanana/Minchumina Planning Unit completed and implemented
  - Alaska Smokejumpers made first fire jump with Ram-air parachute
  - AFS Branch of Fire Coordination establishes a situations office as a gathering and dissemination point for fire intelligence
- 1983** May 29 Rosie Creek Fire
- 1984**
- Five new Interagency Fire Management Plans implemented with 40-percent of lands designated Limited Management Option
  - Galena retardant site modernized
  - June 28 to July 4— Boise Interagency Fire Center Infrared aircraft used to monitor Limited fires
- 1985**
- State assumes protection responsibilities for McGrath Area, this completes the assumption of protection areas by the State— only minor boundary adjustment will occur in the future
  - The two AFS Hotshot crews become fully operational Category 1 crews
  - Year of 2 fire seasons
  - USAF C-141 transport planes (five) move 285,000 pounds of supplies from Alaska to California in one day
  - Conversion from Large Fire Organization to Incident Command System
- 1986**
- Ten project fires staffed simultaneously
  - Height of season, 83 Emergency Firefighter crews assigned to fires at one time
  - Trial year for Fire Familiarization Program
  - Alaska Initial Attack Management System upgraded— MV-8000 computer installed in Fairbanks
- 1987**
- May 22, Granite Creek Fire near Fort Greely spread 12 miles
  - Alaska Interagency Fire Coordination Center first year of operation
  - October 22, AFS warehouse cold storage building burned— \$2M in supplies lost
  - North Star Crew first operational season
  - Mendocino Hotshots detailed to Alaska from June 8 to July 17— Chena Hotshots detailed to Mendocino National Forest July 29 to end of season
  - Major fire year in Lower 48— 1,613 personnel dispatched from Alaska to Lower-48, the largest commitment of Alaskan resources to the Lower 48 to date
- 1988**
- June 11 to 17, 90 lightning-caused fires
  - 2.1M acres burn statewide
  - 10 Class 2 fires in July
  - 1.6M pounds of paracargo dropped
- 1989**
- 59 fires occurred in AFS protection and 1,825 acres burned; 69,000 acres burn statewide
  - Alaska Class I team assigned to the Valdez Oil Spill
- 1990**
- 276 lightning-caused fires reported between June 26 and July 8
  - Tok River Fire burned 98,000 acres and threatened the town of Tok
  - Nearly 3.2M acres burn statewide; 2.2 M acres were in AFS protection.
  - Eight fires were greater than 100,000 acres; two of those were greater than 400,000 acres.
  - 31 Type 1 crews from the Lower-48 fight fires in Alaska
  - AFS Dining Halls in Fairbanks, Galena, Beetles, Tanana, Central and Fort Yukon served a total of 67,954 meals.
- 1991**
- Commercial mushroom pickers arrive in Tok
  - June 22 to July 3, lightning ignited 244 fires; 43 new fires were reported on June 30
  - Smokejumpers had 1,080 fire jumps in AK
- 1992**
- Fall/Winter Caribou moved through Fairbanks for the first time since 1946-47
  - FSS, Smokejumpers and Hotshot crews move into the new Fire Operations Building
  - National Weather Service includes the Canadian Forest Fire Danger Rating System indices on its morning fire weather forecast
- 1993** Minchumina Field Station decommissioned
- 1994**
- Koyukuk River flooded Allakaket, Alatna and Hughes— Lower-48 Type 1 Team assigned on September 13 to assist with rebuilding and recovery efforts; the Alaska team took over on October 1
  - Russian smokejumpers detailed to Alaska, made 14 fire jumps and 13 practice jumps
  - Record number (83) of Type 2 crews dispatched to the Lower-48.
- 1995** Federal Wildland Fire Management Policy and Program Review contained nine guiding principles for fire management and recognized fire as an essential ecological process.
- 1996**
- AFS Military Zone created
  - Miller's Reach fire burned 344 structures
- 1997**
- 2M acres burn; 786,000 were BLM Anchorage District and 731,000 were on the Innoko National Wildlife Refuge
  - The final size of the Inowak Fire is 607,000 acres— largest fire since 1969
- 1998**
- Alaska Interagency Wildland Fire Management Plan provided a statewide reference for fire operational information and incorporated the 1995 Federal Fire Policy Guidelines
  - A major suppression effort— 622 overhead, 52 crews and 32 engines staffed the Carla Lake Fire which burned 54,000 acres
- 1999**
- AFS completed Frost Fire Prescribed Burn, in partnership with a University of Alaska research team— scientists from around the world involved
  - June 13, winds gusted to 50 mph causing major run on the Donnelly Flats Fire— Fort Greely and parts of Delta Junction were evacuated
- 2000**
- Memo dated March 28 from the Director of Fire and Aviation to the State Director made funds from the Interior Hazardous Fuel Reduction Operations sub activity available to AFS for fuels management activities on village lands
  - As a result of a fatal accident during a practice jump in Alaska in late April, the BLM Smokejumper Program was suspended nationwide and jumping ceased until the investigation was completed— USDA FS jumpers were ordered for Alaska and Helitack once again used by AFS for initial attack
  - Cerro Grande Prescribed Fire in New Mexico escaped, resulted in a 30-day suspension of the BLM prescribed fire program
  - 81-percent of the acres burned statewide were in the Tanana Zone (612,000 of 756,000)
  - Alaska Type 1 Team mobilized three times to the Lower-48 and completed five assignments
  - AICC processed 922 overhead request and 73 crew orders for Alaska resource to respond to fires in the Lower-48
  - "Managing the Impact of Wildfires on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000" resulted in Congress substantially increasing in the Fiscal Year 2001 appropriations and issuing direction for aggressive planning and implementation to reduce risks of wildland fire in Wildland Urban Interface areas
- 2001**
- Review and Update of 1995 Policy contained 17 federal policy statements
  - Majority of acres burned statewide were from two human-caused fires: Survey Line (112,000 acres) and Fish Creek (85,000 acres)— 218,000 acres total burned statewide
  - Alaska Type 1 Team mobilized to World Trade Center

See *TIMELINE*, page 12