FIRE CONTROL HISTORY ON THE PAYETTE NATIONAL FOREST

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FIRE CONTROL

Fire management on the Payette National Forest is a complex task. The Forest protects over 2.5 million acres of land, including holdings of other agencies. Much of this area protected by the Forest is rugged and remote. Abundant fuels and dry summer weather conditions with frequent lightning storms combine to create fire danger on the Forest.

FIRE OCCURRENCE - THE 1970's

The number of fires occurring on the Forest and the amount of acreage burned varies greatly from year to year. When the decade of the 1970's is compared with the 1960's, the main contrast is in the number of acres consumed by fire. Roughly the same number of lightning-caused fires occurred during both decades, but far fewer acres burned during the 1970's. Although the total acreage burned was small, a large number of fires occurred in 1972, when 297 fires burned 371 acres of land. In addition, more person-caused fires occurred in the 1970's than in the 1960's. A record for person-caused fires, 57, was set in 1979. Although there were significantly more person-caused fires during this decade, only two of these fires burned more than 300 acres.

THE 1980's

The 1980's were a time of contrast. The Forest experienced plentiful precipitation during the first half of the decade. A total of 135 inches of precipitation fell between 1980 and 1983. Only 49 fires occurred on the Forest in 1982, which tied with the previous record set in 1948. In 1984, records were set for the least person-caused acres burned (0.9), for the least lightning acres burned (15.9), and for the least total acres burned (16.8).

During the last years of the 1980's, drought conditions created serious fire danger. The era of "non-fire" years ended in 1985. Although the number of fires was not unusually large that year, over 27,000 acres burned. The major fires were French Creek, which consumed 14,578 acres, and Savage Creek, which encompassed 12,121 acres.

1986 was another major fire year, and 34,136 acres burned on the Forest. The largest, Goodrich, burned 10,400 acres. In addition, 23 fires in The Frank Church River-of No Return Wilderness consumed 20,010 acres. Devils Teeth was a major Wilderness fire, burning 8,269 acres. No suppression action was taken on this fire.

The 1987 and 1988 fire seasons reflected the continuing drought. The annual precipitation for 1987 was 18.21 inches, compared to a fifty year average of 28.12 inches. In 1987, 129 fires burned 13,407 acres. Fire activity continued into November, with extremely dry fall weather. The dry weather continued in 1988, and fire conditions were extreme. Because of fire activity in other areas, including Yellowstone National Park, fire suppression resources were stretched to the limit. The Silver Creek Fire on the Krassel Ranger District made a crowning run of 20,000 acres, threatening people and property. Major resource damage occurred on the Eagle Bar Fire, a proposed timber sale area on the Council Ranger District.

Precipitation was slightly above average in 1989. However, several seasons of above average precipitation are necessary to restore moisture to large fuels and help reduce fire danger. The worst fire season in memory occurred on the Forest in 1989, when a record number of 385 fires occurred. A

lightning storm which occurred on July 26 started 248 fires on the Payette National Forest. Unstable air and low humidity made containment difficult. The Whangdoodle Fire, part of the Steamboat Complex, came within a mile of the historic mining town of Warren. Other large fires included Partridge, Curren, Steamboat, Zena Creek, Game Creek and Dollar Creek. A record number of fire personnel, 6800 people, were involved in suppression efforts. Personnel from the Sixth Army, supported by Blackhawk helicopters, assisted the Forest Service. Records were set for helicopters in use (55), aircraft hours logged (over 4500), smokejumper fire jumps (939), and gallons of retardant delivered (740,000). At times, up to five large tanker planes were lined up at the McCall Airport, waiting to load up with retardant.

AVERAGE ANNUAL FIRE OCCURRENCE

YEAR	LIGHTNING	ACRES	PERSON CAUSED	ACRES	FIRES	ACRES
1960-69	118.6	2301.1	18.8	838.6	137.4	3139.7
1970-79	118.2	342.18	32.2	545.98	150.4	888.16
1980-89	113.2	-	14.8	-	128.0	21942.5

(Data from Historical Files, Dispatch Office, Smokejumper Base)

FIRE POLICIES

Historically, U.S. Forest Service policies have emphasized suppression of all fires. Until national policy was changed in the 1970's, the Payette National Forest followed the 10:00 a.m. policy. This meant that all fire starts would be controlled by 10:00 a.m. the next day.

During the 1970's, the natural role of fire in ecosystems was recognized, and in 1971 Forest Service policy was changed to allow lightning-ignited fires in designated wilderness areas to burn under specific conditions. In 1978, fire control policy directed that the cost of fire suppression and the resulting damage to the land be weighed against the value of the resources. The National Fire Management Analysis System (NFMAS) was used to evaluate cost versus resource values.

Flexibility of fire policy allowed the Forest Service to choose the most appropriate suppression response for individual fires. After analyzing fire conditions, the Forest could choose to promptly control a fire, or to use confine or contain strategies. For example, the 1985 Savage Creek Fire burned 4905 acres of land which included private holdings and valuable timber. The head of the fire reached higher elevations adjacent to wilderness, and was managed under confinement strategy, using natural terrain as boundaries. The portion of the fire which threatened commercial timber was managed under control strategy. The combination of strategies protected fragile land types from fire suppression activity, promoted safety for firefighters, and lowered suppression costs.

Under Payette National Forest fire management plans, fires are categorized as either wildfires or prescribed fires. Wildfires, which are not planned or prepared for, are managed under the most appropriate suppression response. If initial attack fails, further strategy is planned using the Escaped Fire Situation Analysis (EFSA). Prescribed fires are planned or prepared for fires, and are allowed to burn under prescribed conditions. The role of prescribed

fires in reducing buildup of fuels, to enhance wildlife habitat, to enhance vegetative succession, and to reduce fire suppression costs has been recognized by the Payette National Forest. In 1979, the Forest created the 96,000 acre Lake Fork Fire Management Area to reintroduce natural fires. There is no suppression in fire management areas unless a fire threatens to leave the area's boundaries or threatens human life or private property. During the 1979 fire season, the Kennally Creek Fire was allowed to burn in the Fire Management Area under prescribed conditions for 28 days. However, when fire danger became severe and the fire began to grow at a daily rate of 80-100 acres, suppression action was taken.

In 1983, a fire management plan was developed by the Payette, Bitterroot, Nez Perce, Salmon, Challis, and Boise National Forests to help reestablish the natural role of fire in the Frank Church-River of No Return Wilderness. Under the plan, prescribed fires would be allowed to burn naturally. The Frank Church-River of No Return Fire Management Area was approved by the Regional Foresters of R-1 and R-4 on July 5, 1985.

The 1988 Forest Plan described a fire management policy of appropriate suppression response on all wildfires, stating that "the kind, amount, and timing of the suppression action is based upon location, management direction, and expected burning conditions." The Plan reiterated fire policy of allowing prescribed fires to burn in the Lake Fork Fire Management Area and in the Frank Church-River of No Return Wilderness. Opportunities to increase the use of prescribed fires to benefit Forest resources and to provide a more natural role in the environment were emphasized by the Forest Plan.

In 1988, the severe fires in Yellowstone Park and the western states caused a change in national Forest Service policy, and led to changes in fire management on the Payette National Forest. All fires in the Frank Church-River of No Return Wilderness and the Lake Fork Fire Management Area were managed as wildfires during the 1989 fire season while fire management plans were revised. In 1990, an amended fire management plan which contained stricter rules for prescribed burns was approved for the Frank Church-River of No Return Wilderness. The Lake Fork Fire Management Area is no longer managed as a prescribed fire area. Current policy for the Payette National Forest is to take appropriate action in suppressing all fires using "the most appropriate suppression response." The appropriate suppression response is based upon a fire analysis, which includes an evaluation of long-term fire potential, the cost of suppressing the fire, safety, and possible impacts to the resource.

LOOKOUTS

The solitary job of being a fire lookout is much the same as it was when the Forest Service lookout system began in the early 1900's. Although communications systems have improved, other equipment remains basically unchanged. Lookouts still rely on the Osborne firefinder, which was invented in 1914, to plot the location of fires. The alidade, anemometer, rain gauge, hygrothermograph, fuel moisture scales, binoculars, and radio remain standard tools of the trade.

A major change in firefighting, and in the Forest Service in general, is decreased reliance on horses and mules. These animals were once used extensively to transport materials used in trail construction, stringing telephone lines, and building lookout towers. Without them, many large fires could not have been contained (Kresek 1984:375). Today, supplies that once were packed to remote lookouts with horses are often brought in by helicopter (Bates). Because of restrictions on the use of motorized vehicles in

wilderness areas, lookouts located in the Frank Church-River of No Return Wilderness still depend on pack strings. About 35 horses are currently used on the Payette National Forest; there were 100 in 1968 (Blattner).

The use of aircraft in fire detection means less dependence on fire lookouts. Because of increased used of aerial detection, and a Forest Service policy to eliminate unused structures, the number of lookouts on national forests has decreased. In the summer of 1990, there were 14 active, manned lookouts on the Payette National Forest; there were two additional active state lookouts (Swan).

HOT SHOTS

The Inter-Regional Fire Suppression Crew, representing Region 4, was based in McCall until 1980. This "hot shot" crew was responsible for fighting difficult and dangerous fires in the western states. The crew was located at the Thorn Creek Camp west of McCall. Boise is currently the base for the Boise Hot Shots. Other hot shot crews are located throughout the western states.

SMOKEJUMPER BASE

The McCall Smokejumper Base, which serves the Intermountain Region, was started in 1943 with a crew of five smokejumpers who had been trained in Missoula. The airplane used on the Payette was a Travelaire owned by Johnson Flying Service and piloted by Penn Stohr. The first jump on the Payette National Forest occurred on August 14 of that year, when John Ferguson and Lester Gohler, assisted by spotter Stewart S. (Lloyd) Johnson, jumped a fire at the head of Captain John Creek. The next year, there were 19 jumpers at the McCall base, making 17 jumps. By 1946, there were 50 jumpers in McCall, and some Civilian Conservation Corps buildings were moved in for the operations.

In 1947, a training program was implemented, and training facilities were added to the base. Fifty jumpers were trained at the base in 1947. As the smokejumper program developed, new facilities were built. In 1958, three permanent barracks, a laundry, and trailers for married jumpers were added. A new loft building was constructed in 1959, and a kitchen was added in 1964.

Until 1980 smokejumpers deployed by the Boise Smokejumper Base were trained in McCall and stationed in Idaho City. The Boise Smokejumper Base closed in 1980, and the number of smokejumpers in McCall increased from 55 to aout 80. McCall was recognized as the best location for initial attack on a large area with a high concentration of fires. The smokejumper base serves over seven national forests which experience an average of 1,000 fires a year.

A new smokejumper complex was built in 1988 on land acquired from the state of Idaho in a land exchange. The new complex includes a parachute loft, airtanker base and off-site housing for smokejumpers. The main building features a classroom, conference room, administrative offices and a dispatch office as well as a fire pack assembly and storage area, smokejumper "ready" room, a drying and inspection tower, sewing room, rigging room, injury rehabilitation room, and weight room.

The dispatch office serves as a center for smokejumper operations. Automatic weather stations on the Forest send data to the dispatch center. Fires are reported from lookouts and spotter planes. An electronic map board is used to record the status and location of each fire. The dispatch center coordinates the use of aircraft, personnel, and other resources used for fires.

The aviation program on the Payette National Forest handles about 25 per cent of the air activity that occurs in Region 4. Facilities for aircraft at the McCall Smokejumper Base include a 2200 foot taxiway, a helicopter landing pad, airtanker base, tanker pilot ready building, and an aircraft maintenance building. The airtanker base is capable of loading up to 2,000 gallons of retardant in 12 minutes onto an airtanker.

Aircraft most frequently used for transporting smokejumpers include the Twin Otter, Beech 99, and DC-3. The DC-3, whose fiftieth anniversary was celebrated in 1987, can be used to transport up to 18 jumpers. It is also used to transport fire crews and gear to airports, and for drops of firefighting equipment. The following is a list of aircraft which have been used in McCall. The dates given apply to Forest Service use in general.

Curtis Travelair	1940-1969
Ford Tri-Motor	1941-1969
UC-64 Noordyne-Norseman	1945-1954
Twin Beech	1950-1974
Turbo Porter	1966-1970
Cessna 206	1968-1982
Caribou	1972 to present
Aero Commander	1959-1975

(Source: Star News, June 26, 1988)

SMOKEJUMPERS

Providing initial attack on wildfires is the principal duty assigned to smokejumpers. By suppressing fires before they grow to project size, smokejumpers save money and resources. The role of smokejumpers in fire control hasn't changed since the McCall Smokejumper Base began operations in 1943. The methods of fighting fire remained basically unchanged, and smokejumpers still rely on standard equipment such as pulaskis, shovels, and chainsaws to suppress fires. In order to avoid the use of motorized equipment, cross-cut saws are used in wilderness areas.

Improvements have been made in smokejumper gear and deployment systems. The standard leather headgear has been replaced by motorcycle-type helmets with wire face masks. Instead of canvas suits, the jumpers wear jumpsuits made of flame-resistant Nomax; they also wear pilot's gloves and loggers boots. Other equipment includes rappelling lines, emergency fire shelters, radios, and signal streamers.

The military-designed parachutes used in the 1950's and 1960's have been replaced with a parachute system designed by the Forest Service. The FS-12 parachute, which has been used since 1980, offers increased stability, forward speed, and turning mobility. A special deployment system, designed and manufactured by the Forest Service, is also used in smokejumper operations.

One of the major changes in the smokejumper program may be in the smokejumpers themselves. In 1973, smokejumpers over the age of 40 were allowed to continue jumping instead of being automatically retired. In 1987, Thad Duel retired after smokejumping for for 32 consecutive years. This was a national record. Duel's total of 451 jumps also set a record for the McCall Base.

In 1981, McCall-based Deanne Shulman became the first female smokejumper in the U.S. Forest Service. There are currently three female smokejumpers at

the McCall Smokejumper Base. Like their male counterparts, the women must pass strenuous physical fitness tests, and master airplane exits, parachute landings, and rappelling from trees.

Smokejumpers remain an elite group in firefighting. Bill Yensen, who retired from the McCall program after 32 years, noted that quick reflexes, alertness, and the ability to deal with challenges are prerequisites for the job. "When you jump into the Salmon River Breaks, it separates the wheat from the chaff," Yensen said. "A smokejumper is a guy who will accept what comes and make the best of it" (Star News, June 19,1988).

THE FUTURE

It is impossible to accurately predict fire activity each year on the Forest. The years of major fire activity which occurred in the last half of the 1980's could be followed by a series of slow fire years. However, several trends suggest future fire conditions and their effects on Forest Service resources. First, possible climatic changes would mean more dry years and more severe fires. In 1984, five percent of the nation's land was under severe drought conditions. By 1989 that percentage had increased to more than 30 percent. If the drought continues, more and more people, structures, and natural resources will need Forest Service protection from fires. (Sundt 1990:15).

As demands for Forest Service support increases, available funding has been cut. From 1978 to 1987, the number of full-time seasonal firefighters working for the Forest Service has decreased by 40 percent. In addition, funding for fire preparedness has declined. Because less money is available to prepare for fires, when severe fire years occur, the Forest Service must draw huge sums of money from emergency funds. In many cases, relying on emergency funds is much more costly than preparing for fires before they begin. "On average, the Forest Service has received nearly 20 percent less than what it estimates to be the economically efficient level of preparedness in an average year. Similar cuts have been experienced by other local, state and federal fire organizations; this has increased the dependence of those agencies on the Forest Service, straining that agency's capabilities" (Sundt 1990:15).

As the decade of the 1990's begins, it is certain that the Forest Service will face many challenges in controlling fires on the nation's public lands. The Payette National Forest will continue to play an important role in fire activity and suppression efforts.

FIRE STATISTICS

YEAR	LIGHTNING CAUSED	PERSON CAUSED	TOTAL FIRES	ACRES BURNED
1944	78	13	91	520
1945	82	15	97	5200
1946	167	21	188	1827
1947	55	18	73	3641
1948	30	19	49	29
1949	129	19	148	39142
1950	55	5	60	20
1951	80	22	102	530
1952	70	17	87	237
1953	144	17	161	1669
1954	83	19	102	90
1955	104	10	114	426
1956	103	14	117	538
1957	103	8	111	677
1958	87	20	107	372
1959	57	17	74	101
1960	71	24	95	15303
1961	95	27	122	5876
1962	89	24	113	1129
1963	137	17	154	782
1964	46	13	59	75
1965	71	17	88	210
1966	177	22	199	6965
1967	292	4	296	542
1968	146	15	161	370
1969	52	23	75	110
1970	125	11	136	1142
1971	48	25	73	74
1972	271	26	297	371
1973	157	30	187	1005
1974	28	53	81	68
1975	90	26	116	47
1976	59	34	93	1127
1977	171	31	202	109
1978	77	31	107	75
1979	157	57	214	1455
1980	50	16	66	29
1981	110	22	132	216
1982	43	6	49	204
1983	52	11	63	328
1984	71	9	80	16.8
1985	96	11	107	27,150.1
1986	148	17	165	34,136.3
1987	101	28	129	13,407.3*
1988	86	18	104	104,582.16
1989	375	10	385	39,160

*An additional 2,054.9 acres burned in the two fire management areas.
(Source: Historical Files, Dispatch Office, Smokejumper Base)

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