Daniel Boone National Forest

Annual Fire Report

Calendar Year 2000

During CY 2000 the level of fire activity on the Daniel Boone National Forest was below the annual average number of fires for the Forest's analysis period (1986-1994) of 150 fires but above the annual average of 7,036 acres burned per year, with suppression action having been taken on 125 wildland fires involving 12,426 acres. Each of the six districts reported fire activity, with the greatest fire loads occurring on the London and Redbird Ranger Districts. These two districts combined for 71 fires (57% of total) and 8,205 acres (66% of total).

During 2000 all fires were human caused. In spite of continuing drought no lightning caused fires were reported. Arson remained the primary fire cause. Ninety-five fires (seventy-six percent of all fires) were attributed to this reason alone. Arson burned 10,349 acres, which was eighty-three percent of all burned acres.

Fires occurred according to the following seasonal breakdown:

Spring Fire Season	03/01 – 05/15	59 Fires	47%	3,000 Acres
Fall Fire Season	10/15 – 12/15	49 Fires	39%	8,615 Acres
Off-Season	Jan – Feb	9 Fires	7%	677 Acres
Off-Season	June – Oct	8 Fires	7%	134 Acres

During the calendar year there were 55 days when fires occurred. Of these, 29 were multiple fire days (more than one suppression action taken). Fire activity on these days accounted for 84 fires (67% of total) and 11,695 burned acres (94% of total).

Weather and Drought

The year began with a moderate drought in progress across much of Kentucky and predictions for continued below normal rainfall. During January, February, and March the upper level weather pattern was mainly a zonal flow from west to east across the nation. This brought slightly above normal temperatures to Kentucky and rainfall that averaged above normal over the northern portion of the state to below normal over the south. During April a deep trough developed over the western United States with a ridge over the east. Surface fronts did manage to reach as far to the east as Kentucky and near normal precipitation occurred during April and May. For the spring season rainfall over southeast Kentucky averaged between 16 and 18 inches, which was around 3 inches below normal. Across the northern portion of Kentucky rainfall averaged from 20 to 22 inches, 2 inches above normal.

Rainfall during the summer averaged above normal and by September most of the state was no longer in drought conditions.

The Bermuda High anchored itself over the southeast United States in September and remained in place through much of October. Rainfall across Kentucky during October averaged less than an inch in most locations. At the end of the month a deep blocking low developed off the New England coast with a ridge axis over Kentucky. At the surface, low pressure remained just off the east central Atlantic seaboard. The combination of a light southeast flow across Kentucky and a stagnant air mass allowed a subsidence inversion to reach the ground around the 29th of October. This produced some of the driest conditions ever recorded in Kentucky. Afternoon relative humidity dropped to 5 percent a several NFDRS weather stations in Eastern Kentucky and 9 percent across north central Kentucky. These conditions lasted into the first full week of November before the upper level system began to break down. Rainfall for the rest of November and through the middle of December averaged below normal over the southeast while several more inches fell over the north. For the fall season southeast Kentucky received around 7 inches of rain, 4 inches below normal and northern Kentucky received around 9 inches of rain, 2 inches below normal.

Precipitation records for the year are available from the Forest's four automatic weather stations sited in Rowan, Wolfe, Pulaski, and Clay counties. The annual average rainfall from station data was 44.3" inches which is 6.2" below the normal amount for eastern Kentucky (50.50 inches/year). The precipitation deficit total for the last two years is 21.6".

Full implementation of fire weather forecasting services by the Paducah, Jackson, Louisville, Wilmington OH and Huntington, WV occurred during 2000. The Kentucky Interagency Coordination Center remains the focal point for display of fire danger indices and fire weather information for its cooperators.

Two automatic weather stations were added to the fire weather network for Kentucky. Stations at Big South Fork National River and Recreation Area, Oneida, TN and Land Between the Lakes National Recreation Area, Golden Pond, KY began operations during the fall fire hazard season. Each station transmits weather data using GOES technology.

Forest Highlights

Prevention

The Robert E. Browning, Jr. award for excellence in wildland fire prevention activities has not been awarded as of this date. This award honors the memory of Robert E. Browning, Jr. of South Carolina who died on Storm King Mountain on July 6, 1994.

Training

Interagency training sessions offered by the Daniel Boone NF during 2000 included Task Force/Strike Team Leader, S-330; Basic Firefighting and Introduction to Fire Behavior (S-130 and S-190) taught at Blue Grass Army Depot; and Dispatch Recorder, D-110. Forest Service employees also assisted the Kentucky Division of Forestry with instruction of I-200, Basic Incident Command System; S-205 Wildland Fire Management in the Urban Interface; and Intermediate Fire Behavior S-290. A mobile training simulator designed to provide command experience in a controlled environment for Type IV Incident Commanders was previewed during Level II Technicians Training with the Kentucky Division of Forestry.

The Daniel Boone National Forest hosted the "Fire, People, and the Central Hardwood Landscape" Conference March 12-14, 2000 at Eastern Kentucky University, Richmond, Kentucky. The focus of the conference was the

role of fire as an agent of change and renewal in the Central Hardwood region. Abstracts, poster session, presentations, discussions, and a field trip were woven together to explore the historical, present and future roles of fire and humans in shaping the vast and diverse deciduous forest of the Central Hardwood Region. Over 300 individuals from universities, private, state, and federal resource management agencies and businesses, as well as members of the public attended.

Kentucky Interagency Coordination Center

During 2000 the Kentucky Interagency Coordination Center continued to update and improve its Web Site, located at: http://www.r8web.com/boonefire. Fire weather information including Fire Weather Watches and Red Flag Warnings are posted on the web site on a daily basis during spring and fall fire seasons and on an as needed outside of the historic fire hazard seasons. This technology enables Cooperators to easily access critical daily weather and other pertinent fire information. The site provides numerous links to information on fire activity, fire danger, training opportunities, and employment information.

Expanded Dispatch Organizations were operated several times during the calendar year to support interagency cooperators during periods of heavy fire activity. Incident Support Organizations facilitated resource ordering during an active spring fire season for the Daniel Boone NF. During the fall fire season an Expanded Dispatch Organization was developed to support Incident Management Teams simultaneously assigned to the Southeastern District, Kentucky Division of Forestry (Type I IMT, Steve Frye, Incident Commander); to the Daniel Boone NF, Somerset and Stearns Ranger Districts (Type II IMT, Lewis Kearney); and to the Big South Fork NRRA (Type I IMT, Don Studebaker). During this same time period, support to initial attack fires on the Daniel Boone National Forest was provided and a mobilization center at Baldrock Training Center, London Ranger District was operated. This activity represented the most complex expanded dispatch operation undertaken to date by the Kentucky Interagency Coordination Center.

The Kentucky Interagency Coordination Center held its 8th annual cooperators' meeting May 10 and 11, at Land Between the Lakes NRRA. During this session the interagency partners continued to develop the training package for use with the Wildland Fire Training Simulator.

Western Fire Support and Mobilization

Western mobilization began early for Kentucky during CY 2000. Resources were mobilized to fires in New Mexico on May 11th when the Kentucky-Virginia Crew Module was activated. Two 20-person Kentucky State Crews were mobilized as a part of the Kentucky-Virginia Crew Module. Western mobilization continued from May through September. During this period the following resources were mobilized to the West and/or in support of Western Fires:

Agency	Number of Personnel
National Park Service	40
State	49
Forest Service	85
AD Employees (hired by the Daniel Boone)	29
Department of Defense	2
National Weather Service	2

The above listed totals for the State included a total of three Type II Crews.

Agencies included in the above Totals are as follows:

Agency	Unit
National Park Service	Big South Fork NRRA
	Cumberland Gap NHP
	Mammoth Cave NP
	Abraham Lincoln Birthplace NHS
	Obed Wild and Scenic River
State	Kentucky Division of Forestry
Forest Service	Daniel Boone National Forest
	Pine Knot Job Corps Center
	Frenchburg Job Corps Center
	Southern Interagency Fire Cache
	Land Between the Lakes NRA
Department of Defense	Fort Campbell
	Fort Knox
National Weather Service	Louisville NWS Office
	Jackson NWS Office

The following table reflects a total of all resources mobilized outside the state of Kentucky in support of fires both within the Southern Region and other regions throughout the US.

Agency	Number of Personnel
National Park Service	48
State	49
Forest Service	122
AD Employees (hired by the Daniel Boone)	64
Department of Defense	2
National Weather Service	3

In some cases employees took multiple assignments during the year. Therefore the above totals are listed by number of assignments.

Fall Fire Support and Mobilization

During the fall, Forest fire activity rose to a level exceeding the capability of Forest resources. Fire Management officials ordered an Incident Management Team (IMT) giving a delegation for management of fires on portions of the Stearns, Somerset, and London Ranger Districts. These fires were known as the Honeybee Complex and included 23 fires totaling 8,180 acres. All fires were suspected arson-caused wildfires; several threatened structures. A number of other firefighting forces assisted in suppression efforts including the Kentucky Division of Forestry and local volunteer fire departments. A Unified Command was established in Whitley City, Kentucky to coordinate the efforts of these various agencies. Suppression efforts began November 1 and by November 6 all fires were contained.

Southern Interagency Fire Cache

The Southern Area Support Cache in London Kentucky began active incident support within the Southern Geographic Area during February 2000. Incident support continued throughout late winter and spring. Cache support continued for Texas and Oklahoma into the summer months.

The Cache provided supplies to support fire operations in the Southwest and West by filling Cache-to-Cache orders for restock items as well as incident orders.

Cache employees also supported the Southwest and Rocky Mountain Areas by working in Caches and at fire locations in those states. The four employees of the Southern Area spent a total of 18 weeks on this type of assignment.

During autumn of 2000 the Southern Area Cache supported fire incidents in North Carolina, Kentucky, Virginia and Tennessee. Fire season ended in late November. However, the Cache continued to support cleanup efforts for a large coal sludge spill that occurred in Kentucky. This environmental cleanup effort closed out in December.

Fortunately, the Southern Area experienced no hurricane activity this year.

During CY 2000 the Cache shipped 451,000 pounds of materials in 716 issues, representing 7668 line items with an inventory value of over $5 million dollars. In addition, returns for 6,500 line items with a value of $3.2 million dollars were processed.

Other

The Forest hosted an international visitor from Ghana during the first week of April. Highlights of the Forest's preparedness, suppression, and prescribed burning programs were presented providing unique opportunities for cross-cultural comparisons of aviation and fire management activities.

The Forest underwent a Fire Program and Financial Review, May 15-19. A team led by Larry Grimes visited two districts, the Big Swag Helibase, and Pine Knot Job Corps Center during their stay.

During 2000 adoption of a new fitness-testing program for wildland and prescribed fire personnel was adopted. Conversion to the "Pack Test" occurred prior to the fall fire hazard season. Firefighters now complete a health-screening questionnaire, receive physical fitness exams if warranted, train, and demonstrate fitness by carrying prescribed weight loads for a measured distance.

CY 2000 Statistics

Summary	
Total # of Fires	125
Total Acres	12,426
Forest Service Acres	7,220
Non-Forest Service Acres Protected by FS	4,531
Acres Outside FS Protection	675

Fires By District

District	# Fires	%	Acres	%
Morehead	6	5	228	2
Stanton	5	4	472	4
London	35	28	2,093	17
Somerset	14	11	665	5
Stearns	30	24	2,859	23
Redbird	35	28	6,109	49
Totals	125	100	12,426	100

District Fires/Acres by Size Class

	Class A		Class B		Class C		Class D		Class E		Class F	
	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres	Fires	Acres
MOR	1	.1	1	1	-	-	4	227	-	-	-	-
STA	-	-	2	7	2	50	-	-	1	415	-	-
LON	4	.6	14	41	13	475	3	617	1	959	-	-
SOM	2	.2	7	20	4	144	-	-	1	500	-	-
STE	3	.3	16	42	6	152	4	713	-	-	1	1952
RED	1	.2	10	33	12	551	7	1310	3	1040	2	3175
Totals	11	1.4	50	145	41	1599	14	2640	6	2914	3	5127
% Fires	9	-	40	-	33	-	11	-	5	-	2	-
% Acres	-	<1	-	1	-	13	-	21	-	23	-	41

Class A	Class B	Class C	Class D	Class E	Class F
≤ .25 Acres	**>.25 – 9.90 Acres**	**10 – 99.90 Acres**	**100 – 299.9 Acres**	**300 – 999.9 Acres**	**1000 – 4,999.9 Acres**

Fires by Cause

	Cause 1		Cause 2		Cause 3		Cause 4		Cause 5		Cause 6		Cause 7		Cause 8		Cause 9	
	#	Ac.	#	Ac.	#	Ac.	#	Ac.	#	Ac.	#	Ac.	#	Ac.	#	Ac.	#	Ac.
Mor	-	-	-	-	-	-	1	48	-	-	-	-	5	80	-	-	-	-
Sta	-	-	1	5	-	-	2	50	1	415	-	-	1	2	-	-	-	-
Lon	-	-	-	-	-	-	1	4	2	983	1	4	30	1087	-	-	1	15
Som	-	-	-	-	-	-	-	-	-	-	6	91	6	567	-	-	2	6
Ste	-	-	-	-	-	-	-	-	7	30	-	-	22	2825	-	-	1	5
Red	-	-	-	-	1	1	-	-	3	420	-	-	31	5688	-	-	-	-
Totals	-	-	1	5	1	1	4	102	13	1848	7	95	95	10349	-	-	4	26

By Cause – Forest Totals

Cause	#	%	Acres	%
Lightning	-	-	-	-
Equipment Use	1	<1	5	<1
Smoking	1	<1	1	<1
Campfires	4	3	102	1
Debris Burning	13	10	1848	15
Railroad	7	6	95	<1
Arson	95	76	10349	83
Children	-	-	-	-
Misc.	4	3	26	<1
Totals	125	100	12426	100

Detection Methods

Method	**#**	**%**
FS Lookout	1	<1
Other Lookout	1	<1
FS Patrol	11	9
Other FS Employee	11	9
Planned Cooperator	30	24
FS Permittee	1	<1
FS Aircraft Observer	11	9
Other A/C Observer	5	4
Others	54	43
Totals	125	100

Annual Precipitation

	Triangle Mountain	Koomer	Somerset	Redbird
Jan	2.2	2.36	2.19	3.53
Feb	5.12	3.95	4.55	3.22
Mar	2.52	2.48	3.33	2.54
Apr	4.09	5.07	5.85	6.65
May	2.37	4.30	5.19	5.16
Jun	7.71	5.37	2.27	7.61
Jul	8.07	4.35	6.40	5.94
Aug	3.82	2.76	2.42	3.24
Sep	3.36	3.33	2.42	4.95
Oct	1.25	1.06	0.42	0.73
Nov	1.60	1.55	2.06	1.89
Dec	3.53	3.72	3.30	5.39
Totals	45.64	40.30	40.4	50.85

Land Ownership Protection Report

State	S&P Offset	NF Land	Total	NF Land Protected by Others
Kentucky	1,090	695,404	696,494	882

Prescribed Burning Accomplishments

District	Objectives				
	Leveraged	Wildlife	Planning	Fuels	Totals
Morehead	169		500		669
Stanton			149	167	316
London					
Somerset	96		2,000	1,102	3,198
Stearns			2,000	421	2,421
Redbird			500		500
SO					
Totals	265		5,149	1,690	7,104