Zion
Fire & Aviation Management

National Park Service
U.S. Department of the Interior

Annual Report 2007

Dakota Hill Wildland Fire

2007 Season Overview

The 2007 season was a very busy one for Zion National Park's Fire and Aviation Management Program and its staff of 41 people (both seasonal and permanent). Nationally, it was a near record year with approximately 9 million acres burned.

Zion was in severity fire funding for much of the season and fire restrictions were once again enacted for the sixth year in a row. Additional staffing was brought in from various agencies including NPS, BLM and FS to support the local fire severity and ongoing wildland fires.

Zion had 18 wildland fires in 2007 that burned 6,188 acres within the park. This included the Dakota Hill Fire Complex, at 5,848 acres (8,078+ acres total). Zion was also involved in numerous wildland and prescribed fire support actions within the Color Country Interagency Fire Management Area and throughout the country.

Zion once again assisted with the fire management programs of its seven cluster parks (BRCA, PISP, TICA, GOSP, CEBR, GLCA, and CARE). Zion supported all fire management activities in these parks including prescribed fire in BRCA and technical expertise for planned fuel treatment projects at GOSP.

Zion continues its tradition of interagency cooperation as a member of the Color Country Interagency Fire Management Area whose response zone covers 14.7 million acres of federal, state and private lands in Southwest Utah and Northwest Arizona. This group helps to promote safe and effective fire management in Color Country through interagency cooperation and coordination. Zion representatives served on the Operations, Fuels and Information/Education Committees. The area had another busy wildland fire season running from April to late September with 495 fires reported totaling 182,704 acres burned. The area also hosted seven Incident Management Teams during the fire season.

Brent Woffinden was welcomed to Zion's staff in May from the Fish and Wildlife Service as our new Fire Management Officer. Jeff Hickerson, Zion's Assistant Fire Management Officer, moved on to a regional position in New Mexico in November. His position will be filled in Januarary 2008 by Taiga Rohrer from the Dixie National Forest. Zion's Fire Ecologist, Kelly Fuhrmann, accepted the Chief of Resource Management position at Bryce Canyon. His position will be filled by Katie Johnson who was Zion's Lead Fire Effects Monitor.

2007 Season Highlights

One of two new Type 6 Engines Zion received this year

- Management of 18 wildland fires within the park totaling 6,188 acres (including one Fire Use Fire of 3 acres)
- Hiring of three permanent fire management positions including Fire Management Officer, Assistant Fire Management Officer and Fire Ecologist
- Assisted with 162 fires outside the park
- 15 fuel treatments involving 1,218 acres in the park, including the 1,008 acre Pine Valley Peak Rx.
- Continued development of Zion Fire Management webpage (http://www.nps.gov/zion/naturescience/fire-management-homepage.htm)
- Assistance with the production of County Wide Community Fire Plans and assistance with other communities in the planning phase
- Fire restrictions were in effect for sixth year in a row 6/25 – 9/7
- Received severity funding for additional staffing from June 8 through August 4.
- The Zion Fire Use Module participated in over 1062 person days worked
- Zion Helitack Module flew approximately 358 hours in support of fire and other operations throughout Color Country
- Along with resource management, continued a forest management program to reduce hazardous fuels and provide for the restoration of aspen at Lava Point
- Zion received two new Type 6 Wildland Fire Engines to replace our old ones
- A BAER Team (Burned Area Emergency Response) was brought in to deal with the impacts from the Dakota Hill Complex Fire. This included the production of an Environmental Assessment and the subsequent Finding of No Significant Impact for a 3,000+ acre aerial herbicide spraying project on the burned area to reduce the invasion of exotics.

Dakota Hill Wildland Fire Complex 2007

The Dakota Hill Complex was ignited by lightning on July 15. There were a total of five fires in the complex, four of which were in Zion and one on lands managed by the Bureau of Land Management Kanab Field Office.

The Central West Zone Type II Incident Management Team (Sciacca) was called in to manage the incident on July 18. The two largest fires in the complex were the East and West Fires. The West Fire was composed of two ignitions that grew together on July 19 and grew to the final acreage of 2,053 acres over the course of the next three days. The East Fire was a single ignition that nearly doubled in size each day from July 17 to July 21, burning out of the park on July 19 onto BLM and private lands.

At the time of containment 5,848 acres had burned within the park, 2,200 acres on BLM, and 996 acres on private lands. The fires within the Dakota Hill Complex were declared contained on July 29. The incident was turned over to a park Type III team on July 26.

An interagency BAER Team (Burned Area Emergency Rehabilitation) was called in on July 31 to assess the impacts from the combination of the fires and suppression activities. The team prepared a Burned Area Emergency Response Plan in accordance with park and national policy. The plan provided emergency stabilization recommendations for all lands burned within the perimeters of the two largest fires of the Dakota Hill Complex. The primary objectives were to prescribe cost effective post-fire stabilization measures necessary to protect human life, property, and critical resources and to promptly stabilize and prevent further degradation to affected resources on lands within the fire perimeter or downstream impact areas and mitigate damages caused by fire suppression activities. The team analyzed the fire impacts and fire suppression activities throughout the lands burned by the fire, including those areas outside the fire that may have been incidentally affected as a direct result of suppression activities.

The most significant recommendation from the BAER team called for the aerial application of herbicide (Plateau®) to the portions of the burned area within the park. The proposed treatment is intended to interrupt the grass-fire cycle that is perpetuated by cheatgrass, a non-native, highly flammable grass. A similar project was completed in the park in 2006 after the Kolob Fire that yielded promising results. An Environmental Assessment (EA) was prepared by the park that addressed issues related to the herbicide application on 3,000+ acres within the burned area. A Finding of No Significant Impact was signed in October and the project began shortly thereafter. The aerial herbicide application project was successfully completed in mid-November. The project area will be monitored through the coming years to evaluate its effectiveness.

Erosion control rehabilitation

Aerial application of herbicide

Fire Effects Monitoring Program 2007

The 2007 field season for the Southern Utah Group Fire Effects Monitors provided new opportunities for our crew members. With three new Fire Effects seasonals and the Lead, we worked together to complete the 2007 field work and data entry without a glitch. This season was unusual for us in that we provided more fire suppression and severity support to the park than in the past. Consequently, the collaboration between fire effects and fire operations proved to be the best in years.

The Fire Effects Monitors began the season with brush plot installations followed by the Utah Prairie Dog Rx in Bryce Canyon National Park. This was the only spring prescribed fire in the network and proceeded to be the extent of our time spent at Bryce this summer. The remainder of the work occurred in Zion where plot reads were segmented by fire suppression actions within the park. The Fire Effects crew added firefighters and fire monitors to the effort, working on both taskbooks and GIS skills. One FMH plot, in the Three Finger Mesa burn unit, was burned in the West Finger Fire with positive post-burn results.

Composite Burn Index (CBI) data was collected on the 2006 East Mesa Rx to ground truth the accuracy of satellite burn severity imagery. It was found that the majority of the burn was classified as lightly burned, at 55%. The Pine Valley Peak Rx in Zion in the fall was completed in two segments. The Northgate Peaks section had previously been burned in the fall of 1999 while the Lee Valley section had burned in the spring of 2000. The Pine Valley Peak Rx was a second entry maintenance burn.

The Fire Ecologist was involved with post fire restoration under the BAER project for the Dakota Hill Fire. The BAER team recommended similar treatments that were implemented on the Kolob fire in 2006. As is the case with the Kolob Fire, the Dakota Hill Fire treatment will be followed up with 3 years of monitoring by Northern Arizona University graduate students to determine the effectiveness of controlling cheatgrass in the ecosystem that was burned by the fire. After the 3 year period, this program will absorb these plots.

The Fire Ecologist also served as the Acting Chief of Resources until June and then proceeded to vacate the position to become the Chief of Resources Management at Bryce Canyon National Park. His hair will be sorely missed. Bye Kelly!

Park	Monitoring Type	Type of Plot Pre-burn	Pre-burn	Install & Post	Pre- and Re (1, 2, 5, 10 yrs)	Imm.	Post burn	Total Plots
Zion	Great Basin Sage Brush	FMH Brush		0	0	3	1	4
	Pinyon / Juniper	FMH Forest		0	0	0	2	2
	Ponderosa Pine	FMH Forest		0	0	2	8	10
	Ponderosa Pine	Photo Point		0	0	0	3	3
	Gambel Oak	FMH Forest		0	0	1	4	5
	White Fir/ Mixed Conifer	FMH Forest		0	0	0	3	3
	White Fir/ Mixed Conifer	FMH Forest		0	0	0	2	2
	Quaking Aspen	FMH Forest		0	0	1	0	1
	East Mesa Rx	CBI		0	0	0	19	19
Bryce Canyon	Black Sagebrush	FMH Brush		4	0	4	1	9
Total				**4**	**0**	**11**	**43**	**58**

Fire Information and Education 2007

The Fire Information and Education program at Zion is coordinated by the Fire Information and Education Specialist (FIES) whose primary responsibility is to establish and coordinate internal and external fire information, education and prevention programs in order to present an integrated interdisciplinary fire program within Zion (and the other Utah cluster parks) and the National Park Service (NPS) as a whole.

Smokey Bear visits Springdale Elementary School

2007 was another busy year for the Information and Education portion of Zion's Fire Management Program. The park experienced 18 wildland fires that burned 6,188 acres including the 5,848 acre Dakota Hill Complex. The FIES served as Information Officer (PIO), either directly or indirectly, on all these incidents. The incidents required the production and dissemination of fire information, both internally and externally, and in a variety of mediums, including press releases, media interviews, park memos, posters and webpages.

The FIES produced numerous fire-related brochures, posters, handouts, site bulletins, and other information for Zion, the NPS and Color Country. The messages were delivered in an assortment of mediums, both directly and indirectly, and by a wide variety of individuals, including the FIES, fire staff, park interpreters, resource management staff, and IOFs assisting the FIES. The FIES was also involved in the training of seasonal park employees and concession staffs in regards to fire management.

One of the major duties of the FIES is the updating and continued development of the wildland fire webpage (http://www.nps.gov/zion/naturescience/fire-management-homepage.htm), which is hosted by Zion's main webpage. The site contains a wealth of information regarding wildland fire management in Zion and the NPS.

The FIES is a qualified PIO1 trainee and is currently serving in that function on a Type I Incident Management Team that manages wildland fires throughout the country. The FIES also served as a PIO on numerous wildland and prescribed fires in the Color Country area and served on a detail to Bandelier National Monument to help them prepare for a planned prescribed fire. All of these fire events, especially the prescribed burns, depended heavily upon the timely and accurate dissemination of information to the public, staff and media.

The FIES serves as the NPS representative and Chairperson for the Color Country Interagency Information and Education Committee, an active group that produces and disseminates wildland fire-related information and educational materials/programs. This committee is part of a larger group known as the Color Country Interagency Fire Management Area that coordinates fire management activities throughout Southwestern Utah and northwestern Arizona.

The FIES also represents the NPS on two other interagency committees including, the Great Basin Fire Education and Prevention Committee and the Utah Fire Communications Committee.

As well as the FIES duties in the Fire Management Program, the position also assists with the Public Information Program in the park. This involves the production of numerous press releases, media interviews, a park profile, co-managing the park's website and being a member of various park committees and work groups.

Following is a list of specific fire-related information/education activities for both Zion and associated national parks and the Color Country Interagency Fire Management Area. There are no exact figures for the number of people contacted in 2007 concerning non-personal fire-related messages, but it certainly numbered in the thousands.

Zion and other NPS Cluster Parks 2007

Information/Education Activity	Staff	Efforts	Contacts
Personal			
Fire Ecology Class	FIES	1	6
Kids Fire program	Interpretation	5	190
Evening Program (Fire)	Interpretation	12	967
Earth Day Booth	FIES, staff	1	765
Informal roving during fire activities	FIES, staff	5	500+
Community Fire Meetings	FIES, staff	3	200+
Zion Staff Training	FIES, staff	3	48
Landscape Architect Students	FIES, staff	1	12
Color Country Educ/Prev Programs	Interagency	38	18,000+
Color Country Media Day	Interagency	1	15
Non-personal			
Fire Webpage	FIES	on-going	-
Success Stories	FIES	4	-
NPS Fire Reporting	FIES	7	-
Fire Press Releases	FIES	14	-
Fire Restriction Newspaper Ads	FEIS	1	-
Bulletin Boards in Zion	FEIS	25	-
Spectrum Newspaper Articles (Fire)	FEIS	6	-

Zion Fire Use Module 2007

The 2007 fire season marked the twelfth season for the Zion Fire Use Module. This year had several firsts for the Module and its staff.

Zion Fire Use Module 2007

The Module was available from April to November, and during that time we continually demonstrated the versatile nature of our program. We assisted 7 NPS units with 17 projects, and 10 interagency units with 27 projects. We provided support for 28 prescribed fires, 3 wildland fire use events and 16 wildland suppression fires.

The most significant accomplishments are found beyond the number of acres treated or shifts worked. The first of these accomplishments occurred early in the season; for the first time since 2004, we began the season with no new hires, and returned every crewmember from the 2006 season. This allowed for us to focus on the continued employee development of our crewmembers, and as such, 5 of 7 crewmembers were given the opportunity to detail off of the crew for at least two weeks. Four single resource task books were worked on, two of which were completed. We added an Engine Boss, a Firing Boss, a Burn Boss, a Firefighter Type 1/ICT5, and another Fire Effects Monitor to the crew this season. Kelly Boyd and Sarah Cooper went to Wilderness First Responder training and became certified Wilderness First Responders. Shane Paxton was able to attend both PFTC and FUTA where he was able to gain valuable training and experiences away from the crew. He brought the lessons he learned back to Zion making the module a better program. Waldron and Viktora stayed with the crew for the bulk of the season, but each were allowed to work on task books and new positions; Viktora worked as a Helicopter Manager for 7 days, and Waldron discovered his new passion in fire: Planning Section Chief!

This year the Module was able to have a week for orientation. Several crew members presented topics for discussion to the crew. This orientation was a great success and several excellent ideas were generated for next year's orientation. The module is shooting for 80 hours of critical training before the start of next season.

What can you say about the 2007 fire season? The module worked hard and traveled far and wide to help on numerous projects. We overcame several challenges this season and through good communication and teamwork we were able to press forward. Everyone on the crew had several lessons that they learned and will take those "slides" with them in the years to come.

Zion Fire Use Module 2007

Activity Summary

TASK	Person Days Worked	2007	Average (1996-2006)
Wildland Fire: Suppression	171	16.3%	12.3%
Prescribed Fire: Execution	174	16.4%	12.7%
Travel	113	10.8%	12.0%
Module Operations	182	17.3%	12.8%
Wildland Fire Use	185	17.6%	27.9%
Training	94	8.9%	8.2%
Prescribed Fire: Preparation	86	8.1%	7.3%
Hazard Fuels	55	5.2%	4.3%
Prescribed Fire: Planning	0	0%	0.5%
Fire Effects Plot Work	0	0%	3.1%
	1060		

2007 Acreage Accomplishments

Wildland Fire Fire Use		Wildland Fire Suppression		Prescribed Fire Execution		Prescribed Fire Preperation		Hazard Fuels	
#	ACRES	#	ACRES	#	ACRES	#	CHAINS	#	ACRES
3	**60,610**	**16**	**754,412**	**26**	**8,052**	**6**	**440**	**4**	**12.5**

2007 Roster

NAME	POSITION	STATUS
Edward Waldron	Module Leader	GS-08 Permanent Full Time
Alex Viktora	Assistant Module Leader	GS-07 Permanent Full Time
Shane Paxton	Lead Crewmember	GS-06 Career Seasonal
Travis Hartsburg	Crewmember	GS-05 Career Seasonal
Sarah Cooper	Crewmember	GS-05 Career Seasonal
Kelly Boyd	Crewmember	GS-05 Seasonal
Holly Miller	Crewmember	GS-05 Seasonal

Zion Helitack Module 2007

Zion Helitack Crew 2007

2007 was another very productive season for Zion Helitack. We were given additional funding from IMR to support the hiring of 3 seasonal positions more than our standard complement. This was extremely helpful as we also supported a couple of other programs. Curtis Ritzman, the STF Lead for Zion Helitack, was given the opportunity to work with the Peppermint Helitack crew stationed in Sequoia N.F. This gave him a way to complete his Helicopter Manager Task book and gain experience rappelling, while also helping their program which was in desperate need of experienced firefighters. Alicia Tanrath, the PFT Assistant Manager for Zion Helitack, was offered the chance to work with the Forest Service this season. She provided the management needed for the National Type I helicopter stationed in Cedar City and administered by the Dixie National Forest. This was of great benefit to her as she continues to battle her way back to the arduous level of duty. Thus the additional seasonals helped to keep the numbers available for fire assignments where it normally is, despite the support that we offered to our neighboring agencies in need.

The fire season for Color Country as a whole did not get truly under way until nearly July. We had a very slow start to our season. However, once the season began we did not slow down until the helicopter left in October. We were given the opportunity to take the helicopter and crew to Montana and Wyoming. We spent many days on the Chippie Creek fire, which was located on the Lolo N.F. in Montana. We were pulled off of that fire and sent directly to Yellowstone N.P. where we assisted on the Beaver Damn and the Columbine 1 fires. Overall, we spent nearly 30 days on the road and gained a lot of good experience for the crew.

We completed our season with a couple of projects which included assisting the road and trails crew in the park with a large project on the West Rim Trail. It consisted of pulling a lot of broken concrete off of the trail, and was capped off when we poured thousands of pounds of wet concrete creating a new walk in between the river and the switchbacks leading to refrigerator canyon. It was a good experience and a very beneficial cooperative effort with the roads and trails crew and Helitack. We look forward to continued support of park projects such as this one, in the future. Once again we helped out the Grand Staircase National Monument with the extraction of dinosaur bones from a remote area. We pulled 6 bones out for the GSNM, two of which were never before seen dinosaurs. We enjoyed the change of atmosphere from the fire we were used to, and hope to do this again next season.

Agency	Flight Time	Passengers	Internal Cargo (lbs)	External Cargo (lbs)	Water Delivered (gl)
Zion N. P.	92.9	358	22,745	47,645	5,490
B.L.M.	109.6	420	27,435	13,575	47,980
F.S.	3.6	15	1,250	0	3,900
State / Private	13.4	35	2,030	0	8,212
G.S.N.M.	8.4	38	1,450	4,950	0
Off District	128.4	472	21,985	10,460	23,197
Totals	**358.6**	**1,344**	**77,395**	**76,630**	**91,179**

Initial Attacks = 14 / Fires supported = 36 / Off District = 4 / SAR's = 1 / Prescribed Fire = 1 / Projects = 5

Fuels Treatment Projects 2007

Project	Treatment Type	Acres
Campground Leaf Burning	Broadcast Burn	24
Clear Trap Restoration	Chemical	16
East Mesa Restoration	Pile Burning	7
East Entrance Boundary	Pile Burning	4
Kolob Canyons VC	Pile Burning	5
Kolob Canyons VC	Mechanical	5
Lava Point Restoration	Pile Burning	17
Lava Point Restoration (Firewood)	Biomass Removal	20
Zion Lodge Defensive Space	Chemical	30
Zion Canyon Mowing	Mechanical	35
Oak Creek Housing	Pile Burning	15
Pine Creek Housing	Pile Burning	14
Pine Creek Housing	Mechanical	15
PTI Defensive Space	Mechanical	3
Pine Valley Peak Rx	Broadcast Burn	1008
Total		**1218**

Communities Protected

- East Zion - (Focus Area of the Color Country Interagency Fire Management Area)
  - Little Ponderosa Subdivision
  - Zion Estates
- Kolob - (Focus Area of the Color Country Interagency Fire Management Area)
- Zion National Park Infrastructures

Lava Point Firewood Removal Project

Pine Valley Peak Prescribed Fire

Zion NP Wildland Fires – 2007

Wildland Fire	Date	Acres	Cause	Action Taken
South Camp	5/10	.1	Human	Suppression
East Mesa	6/10	.1	Lightning	Suppression
Shunesburg	7/5	146	Lightning	Confine/Contain
Huber	7/15	.1	Lightning	Suppression
Coal Pits	7/15	2	Lightning	Suppression
The Sun	7/15	.1	Lightning	Suppression
Dakota Hill Complex	7/17	5,848	Lightning	Suppression
Beehive	7/19	40	Lightning	Suppression
Hopi	8/1	.1	Lightning	Suppression
Kinesava	8/1	.1	Lightning	Natural Out
Rockville Bench	8/1	.1	Lightning	Natural Out
Gregory Butte	8/2	.1	Lightning	Natural Out
West Finger	8/28	148	Lightning	Suppression
Fork	8/28	.1	Lightning	Suppression
Lob	8/29	.1	Lightning	Confine/Contain
Imlay	8/30	3	Lightning	Fire Use
Trap	8/31	.1	Lightning	Suppression
Tobycat	9/5	.1	Lightning	Suppression
Total (18 Fires)		**6,188.2 acres**		

Out of Park Assignments

Support Assignments - **162** (Includes support in interagency wildland and prescribed fire activities)

Beehive Wildland Fire

West Finger Wildland Fire

2007 Zion Fire Business Management

Fire Management at Zion National Park is a highly complex program incorporating a full range of management objectives. The authorized funding in fiscal year 2007 was $1.6 million, including 9 FIREPRO base and 6 projects accounts. All fire related fiscal and administrative duties are accomplished by the Fire Program Management Assistant. The FMPA provides expertise in Incident Business Management to Zion as well as the 7 other parks in the Utah Group.

The FMPA processes all travel, payroll, personnel and procurement actions. The busy 2007 fire year resulted in the completion of 250 travel vouchers. Each travel is complex and time consuming often allocating costs to several accounts. In addition, nearly 425 Requisitions were processed for the fire division as well.

FY 2007: AUTHORIZED FUNDING

FIREPRO	Authorized
Readiness	$798,279
Fuels Management	$481,567
Fire Effects Monitoring	$109,827
Fuels Projects - Mechanical	$60,000
WUI Program Management	$183,168
WUI Projects - Prescribed Fire	$500
WUI Projects – Mechanical	$2000
WUI Projects - Other	$19,900

Zion Fire and Aviation Management Staff 2007 (not all present)

Permanent Staff

Fire Management Officer - Brent Woffinden
Assistant Fire Management Officer – Jeff Hickerson
Fire Program Management Assistant – Deirdre Hanners
Fire Ecologist – Kelly Fuhrmann/Katie Johnson
Lead Fire Effects Monitor – Katie Johnson
Fire Information/Education Specialist – David Eaker
Station Manager – James Courtright
Engine Supervisor – David Brothwell
Engine Supervisor - Greg Bartin

Helitack Module
Helitack Leader – Mike Reid
Assistant Helitack Leader – Alicia Tanrath
Crewmember - Curtis Ritzman

Fire Use Module
Module Leader – Ed Waldron
Assistant Module Leader – Alex Viktora
Lead Crewmember - Shane Paxton
Crewmember – Travis Hartsburg
Crewmember - Sarah Cooper

Bryce Canyon
Fuels Specialist - Bruce Fields
Spervisory Forest Tech - Andrew Hostad

Seasonal Staff

Fire Effects Crew - Akasha Faist
Fire Effects Crew - Ryan Muff
Fire Effects Crew - Izzak McHenry
Engine Crew - Mary Renzi
Engine Crew - Andrea Castro
Engine Crew - Jeff Brink
Fuels Crew - Suri Card
Fuels Crew - Gina Allbright
Fuels Crew - Bryan Bird
Fuels Crew - Todd Gerarden
Fire Use Module - Kelly Boyd
Fire Use Module - Holly Miller
Helitack Module - Norman Allen
Helitack Module - Ben Suerig
Helitack Module - Scott Dornbusch
Helitack Module - Paul Dameron
Helitack Module - Jessica Mico-Wentworth
Helitack Module - Rob Brennecke
Helitack Module - Alexis Lewis
Helitack Module - Erin Sparks
Helitack Module - Chris Jensen
Helitack Module - Kate Chappell
Helitack Module - Jezaree McNutt
Helitack Module - Judd Callaway