



**National Park Service
Fire Ecology Annual Report
Calendar Year 2009
Southern Plains Fire Group
Lake Meredith National Recreation Area**

Summary

The 2009 Field Season was a challenging year for the fire effects program of the Southern Plains Fire Group. A new lead fire effects monitor beginning work three weeks prior to the start of the field season, which was also the start of collaborative monitoring with the Southern Plains Inventory and Monitoring Network (SOPN). The collaborative effort with SOPN involved the evaluation of nested-frequency plots as compared with the point-intercept protocol currently in use on the fire effects plots to determine if it is an appropriate method to answer the questions we have, trends in vegetation change. In addition to the plots within the Southern Plains Fire Group plots were read at Fort Larned NHS, Kansas (Midwest Region), and Fort Union NM and Pecos NHP (Pueblo Fire Cluster, IMR). This is because the SOPN spans the two regions in addition Southern Plains Fire Group. We had initially planned to fill six seasonal positions; one GS-5 and five SCAs. However the GS-5 position went unfilled, as the candidate selected for the position withdrew a week prior to starting work. With no remaining candidates available on the cert there was little time to find a replacement, therefore we decided to field a seasonal crew of five plus the lead monitor. Incidents arose with three of the five SCAs resulting in their discharged early in the season and three replacements had to be found. Thus for four weeks of the field season we only had two seasonals available to carry on the work thus greatly curtailing what we were able to accomplish. A lack of effective leadership lead to additional difficulties, that for the most part left the field season in shambles, as the I&M field coordinator had little faith in the data that was collected. Consequently the collaborative effort was suspend, with work taking place at SAND, BEOL, CAVO, WABA and some work at LAMR. Fire Effects work at CHIC was focused primarily on the upcoming ARRA fuels projects with fuels plots installed in The Point Fuels Treatment Units, incorporating the nested frequency protocols used earlier in the summer at the other parks. Thus this field season failed to meet its objectives. While the SOPN chooses to the data from this field season the fire ecology program will retain and enter into FFI what has been accomplished and salvage what is salvageable. The concern SOPN has with the data stem from the following:

- The management of unknowns did not follow protocol satisfactorily.
- Bias in the transect azimuths in some of the plots at SAND, BOEL and CAVO.
- The nested frequency protocols not followed explicitly.

These problems arose in part because there was not a formal field training session with all parties from the SOPN and SPFG. Consequently a coordinated unified crew was not in place when the field season began in earnest with everyone knowing the protocols and the criteria necessary for plot establishment. Furthermore, the leadership was new, with each having one field season or less working with the protocols and this environment. To compound these problems further personality conflicts emerged that made a bad situation worse. This problem manifested on two separate occasions, involving different two different groups of individuals. The first was among the three members that were dismissed and the second occurred later among the field leadership. I will not elaborate further on the later personality issues at play but suffice it say that that they will need to be resolved prior to next field season.

Another structural limitation within the program which was made apparent this field season is the lack of reliably available seasonal housing. The current situation is that the program relies on unoccupied dorm space at Frank Philips College in Borger during the summer months. While not experienced in the first two field seasons, the problem arose this year when the seasonals had to vacate their housing early to accommodate incoming students for the fall semester at the college. If this problem persists under the current arrangement our capacity to carry field work into the months of August and September will be greatly diminished. For the SCA's (or other youth organization) the housing problem could be shifted to the sponsoring organization in the Task Agreement. Having them secure and pay the housing cost which may be less expensive than the current arrangement where we are paying \$300 per month per person. They may have greater flexibility in renting a house or multiple room apartments. However the problem for the GS-5 seasonals is that housing costs are much higher than what their counterparts are paying at other parks (\$160 to \$240 per month), thus placing Lake Meredith at an even greater disadvantage to other parks when it comes to recruiting seasonals.

Field Work

The field work conducted this field season focused primarily on installing all the Long-term (LT) monitoring plots and those Fire Plots to receive a fuels treatment that fall or in the next fiscal year. Table 1 summarizes the number and types of plots established and read and the parks visited.

Table 1. Fire Effects Plot Workload 2009

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre-burn	Immed. Post	Postburn (1-20 yrs)	Total Plots
Lake Meredith and Alibates Flint Quarries	Honey Mesquite	LT	4			4
	Honey Mesquite	FX (FMH)		5		5
	Upland Grass	LT	2			2
	Upland Grass	FX (FMH)		3		3
Chickasaw National Recreation Area	Upland Grassland	LT	6			6
Bents Old Fort	Cottonwood	LT	3			3
	Cottowood – No Salt Cedar	LT	1			1
	Restoration (Old Field)	LT	1			1
	Upland Grass Bougra	LT	3			3
	Upland Grass Spor	LT	3			3
Sand Creek Massacre	Restoration (Old Field)	LT	1			1
	Cottonwood	LT	3			3
	Upland Grass	LT	5			5
	Upland Sand Sage	LT	2			2
	Upland Sand Sage	FX (FMH)	4			4
Washita Battlefield	Restoration (Old Field)	LT	4			4
	Disturbed	LT	1			1
	Upland Grass	LT	4			4
Capulin Volcano NM	Shortgrass Stepp	LT	1			1
<i>Parks Outside SPFG</i>						
Fort Larned NHS	Restoration (Old Field)	LT	7			7
		FX		7		7
	Wagon Tracks	LT	1			1
Total			56	15		71

Table 2. Fire Ecology Staffing FY2008

Monitor	Starting Date	Ending Date	# of Pay Periods	Training and Development
Richard Gatewood (Fire Ecologist-BIBE)	01/06	Present	N/A	
Natalie Robison (Lead-LAMR)	04/1/07	4/12/08	17 (Note: Was on sick leave)	SEAT Manager Training Alamosa Colorado 260, 261
Tyler Engle (SCA)	09/01/09	11/11/09	4.5	S212 Wildland Fire Power Saws
Peter Galante	07/20/09	08/15/09	2	None
Jonathin Horsley	05/25/09	08/14/09	6	S-130/S-190, Arduous Pack Test
Ryan Tallmadge	05/25/09	08/14/09	6	S-130/S-190, Arduous Pack Test
Charles Truettner	07/20/09	09/04/09	3.5	None

Note: This table only reflects those individuals who worked until the end of the field season (Three individuals were dismissed and replaced).

Table 3. Management Objectives and Monitoring Results 2008

No analysis was done for this fiscal year, primarily because of concerns over the data that was collected. A further review of the data will be conducted in the spring of 2010.

Fire effects crew accomplishments and area of focus.

Category	Percent Time (Robison)	Percent Time (SCA Interns)	Notes
FMH/LT plots	1%	90%	This includes all prep time, plant identification, sample processing.
FMH Travel	5%	<5%	
Fire Assignments	5%	0%	
Rx Burns	0%	0%	Rx burns are done outside of the fire effects field season
Data entry	40%	0%	No data entry occurred due to concerns about data quality.
Data conversion	0%	0%	Data conversion completed in 2008.
Data analysis	0%	0%	
Supervision/Admin	20%	0%	Travel, payroll, training paperwork, all other misc. office work that is not data entry or FMH or FFI.
Training	5%	<5%	
PT	1%	<5%	
Miscellaneous	7%	<5%	

Long-Term Monitoring Protocols

This field season was to be used installing the nested frequency protocol proposed by the Southern Plains I&M program in addition to the existing Fire Effects protocols. The nested frequency protocol was to be assessed with respect to the point-intercept method employed by the fire effects program in respect to number of species encountered and time efficiency. Ocular cover estimates were also recorded for each species encounter in the 1m² quadrats. In the smaller scale quadrats nested with in the 1-m² quadrat on the species presence was recorded. Both methods, the point-intercept and the nested frequency, will be evaluated with respect to

efficiency and the number of species encountered on a plot by plot basis, and how effectively does either method detect change composition change or changes of a population. Once the assessment is done a determination will be made as to whether or not retain the nested frequency method and replace the point-intercept method. If the decision is made to go exclusively with the nested-frequency protocol then a transitional period will ensue where the point-intercept procedure is phased out. This likely to occur over a two to three year period where both methods are employed and then the collection of point-intercept data is halted.