



National Park Service Fire Ecology Annual Report Calendar Year 2007

**BANDELIER NATIONAL MONUMENT
EL MALPAIS NATIONAL MONUMENT
PECOS NATIONAL HISTORICAL PARK
SALINAS PUEBLO MISSIONS NATIONAL MONUMENT**

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SUMMARY OF 2007 FIELD AND OFFICE WORK

BAND

The field season at Bandelier began in April when Jenny Byington (Crew Leader) read 3 postburn plots in Project Area 40. These plots were visited again by Jenny, Beth Gastineau (Acting Crew Leader), Kevin Vogler (Seasonal), Tim Violante (SCA Volunteer), and Anne Sharp (SCA volunteer) in June to complete 1 year postburn reads.

In July, the crew visited 9 plots in Project Areas 48, 49, and 55 to complete 10 year postburn reads. The data collected on these plots also doubled as the “tree mortality” reads.

At the end of July, throughout August and into September, the crew worked on plots in Project Area 9 to prepare for the scheduled November prescribed burn. Four plots (that were actually installed last season) were read for the first time and 3 plots were read again to ensure current pre data (the data was more than two years old). Joel Mathews (SCA Volunteer) joined the crew in late August to help with some of these plot reads. In late August, Beth and Anne also took photopoints in five places in Project Area 41 to prepare for a prescribed fire scheduled for the spring of 2008.

In November, Beth and Kevin helped with the Project Area 9 prescribed burn by serving on an engine crew. Beth also monitored weather and smoke on several days. Joel helped organize the traffic through the area.

ELMA

The field season at El Malpais began in early May, when Jenny Byington (Field Crew Leader) visited the East Bat Cave and North Rendija project areas. Jenny trained Kristi Bullock (the former Prescribed Fire Specialist at ELMA) on the protocols for installing plots and collecting data. Together, they installed 9 plots. On the 15th of June, Jenny and Beth spent a day reading the postburn and 1 year reads for 4 plots in the Lava Falls burn unit.

In mid-August, Beth and Tim visited El Malpais again to read 5 plots in the Cerritos Gap project area in preparation for burning in 2008. The crew then came back at the end of August, with Beth, Kevin, Anne, and Joel, to read 5 plots in the Agua Fria project area in preparation for a 2008 prescribed burn.

In September, the crew (Beth, Kevin, and Joel) visited the east side of El Malpais to install 6 new monitoring plots in the North Pasture Ridge and Homestead project areas.

PECO

The field season at PECO began in April when Jenny Byington (Crew Leader) visited 20 plots in Project Areas 18 and 19 for postburn reads.

In July, the crew, led by Beth, finished 1 year postburn reads on the plots established in Project Areas 18 & 19 (20 plots). The crew came back again in July for a week and installed 12 new monitoring plots in Project Areas 6 and 12.

The crew last visited Pecos on October 3rd to re-examine plants one last time before the winter.

SAPU

This season monitoring at SAPU began in April, when Jenny Byington visited Project Areas A4 and A5 to complete postburn reads on 10 plots.

In mid-June, the crew, led by Jenny, read 10 1 year postburn plots in Project Areas A4 and A5. The crew also collected data on 15 more monitoring plots at this time, 10 in Project Areas A2 and A3 and 5 in Project Area Q5.

MISCELLANEOUS

Beth Gastineau attended the 9th Biennial Conference of Research on the Colorado Plateau in Flagstaff, AZ at the end of October with the Ecology Group from Bandelier to learn more about ecology and fire ecology in the region.

Laura Trader created\revised and presented a fire history\fire ecology slide presentation to use for informational and orientation purposes for new employees and volunteers. The presentation covers the local fire history and ecology of Bandelier, Bandelier's Fire Management Program and the options available for managing fire and fuels at Bandelier, the NPS Fire Ecology Program including history, overview, and purpose, the adaptive management process, vegetation communities in Bandelier, vegetation communities where the crew will be working (season specific) at each park (BAND, ELMA, PECO, and SAPU).

Laura fell ill on July 27th and could not return to work until November 11th. She is currently working 10 to 15 hours a week, hoping to return to full time work in the spring of 2008.

FIRE EFFECTS PLOT WORKLOAD 2007

“Pre, Immediate Post, and Post (1-20 yrs)” refer to both prescribed burning and mechanical treatment. The “Total Plots” column indicates the total number of plots installed in the Monitoring Unit to date.

TABLE 1. BAND

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre	Im. Post	Post (1-20 yrs)	Total Plots
BAND	Unit 1	FMH Forest Plot				20
	Unit 8	FMH Forest Plot				4
	Unit 9	FMH Forest Plot	7			32
	Unit 14	FMH Forest Plot				15
	Unit 27	FMH Forest Plot				2
	Unit 29	FMH Forest Plot				7
	Unit 30	FMH Forest Plot				7
	Unit 38	FMH Forest Plot				5
	Unit 40	FMH Forest Plot		3	3	15
	Unit 40	Mortality (Trees Only)				
	Unit 48	FMH Forest Plot			5	5
	Unit 48	Mortality (Trees Only)			5	
	Unit 49	FMH Forest Plot			3	3
	Unit 49	Mortality (Trees Only)			3	
	Unit 55	FMH Forest Plot			1	1
	Unit 55	Mortality (Trees Only)			1	
	Unit 59	FMH Forest Plot				4
	HWY 4	Mechanical Thinning				19
	FS 289	Mechanical Thinning				15
Total			7	3	21	154 total plots in park

A total of 31 plots were read in BAND in 2007. Five photopoints were installed in Project Area 41.

TABLE 2. ELMA

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre	Im. Post	Post (1-20 yrs)	Total Plots
ELMA	Agua Fria	FMH Forest Plot	5			5
	Bat Cave East	FMH Forest Plot	4			5
	Big Horn	FMH Forest Plot				2
	Big Tubes	FMH Forest Plot				5
	Cerritos Gap	FMH Forest Plot	5			6
	Cerro Bandera	FMH Forest Plot				10
	Coral Road	FMH Forest Plot				2
	Double Sinks	FMH Forest Plot				2
	East Rendija	FMH Forest Plot				5
	El Calderon	FMH Forest Plot				3
	Homestead	FMH Forest Plot	4			4
	Lava Falls	Veg\tree\fuel plot		4	4	4
	Lava Fields	FMH Forest Plot				7
	Lava's Edge	Veg\tree\fuel plot				5
	Lost Woman	FMH Forest Plot				2
	Malpais Mill	Veg\tree\fuel plot				4
	North Rendija	FMH Forest Plot				6
	North Little Hole	FMH Forest Plot	5			5
	North Pasture Ridge	FMH Forest Plot	2			2
	Volcano Slopes	FMH Forest Plot				4
Total			25	4	4	88 total plots in park

A total of 33 plots were read in ELMA in 2007.

TABLE 3. PECO

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre	Im. Post	Post (1-20 yrs)	Total Plots
PECO	6	Veg\tree plot	10			10
	12	Veg\tree plot	2			2
	13	Veg\tree plot				5
	14	Veg\tree plot				7
	17	Veg\tree plot				8
	18	Veg\tree plot		16	16	16
	19	Veg\tree plot		4	4	4
Total			12	20	20	52

A total of 52 plots were read in PECO in 2007. A total of 8 photopoints were re-taken in 18 & 19.

TABLE 4. SAPU**Note: The plots installed at SAPU are not permanent transects.**

Park	Monitoring Unit	Type of Plot (FMH, photo point, other)	Pre	Im. Post	Post (1-20 yrs)	Total Plots
SAPU	Abo 2	Veg\tree plot	5			5
	Abo 3	Veg\tree plot	5			5
	Abo 4	Veg\tree plot	5	5	5	5
	Abo 5	Veg\tree plot	5	5	5	5
	Quarai 5	Veg\tree plot	5			5
Total			25	10	10	25

A total of 45 plots were read in SAPU in 2007.

FIRE ECOLOGY STAFFING 2007**TABLE 5.**

Personnel	Starting Date	Ending Date	# of Pay Periods	Training and Development or Comments
Laura Trader (Ecologist)	1-1-07	7-27-07	Unknown at this time b/c Laura was a leave share recipient.	Fire refresher Laura fell ill on July 27 th and did not return to work until November 11 th , with a part time schedule. From July-November, Laura talked with the crew leader each week to ensure plot work was being completed and to answer questions. Laura also accomplished some requested data analysis for ELMA during this time.
Jenny Byington (Lead Monitor)	4-9-07 6-11-07	5-10-07 6-21-07	3	Fire refresher
Beth Gastineau	6-11-07	12-6-07	12	Fire refresher 3 Prescribed Fires FEMO task book initiated
Kevin Vogler	6-4-07	11-15-07	11	S130-190 Fire Assignment in Montana 3 Prescribed Fires
Anne Sharp	5-29-07	8-30-07	SCA	S130-190 Fire Assignment in Montana 1 Prescribed Fire
Tim Violante	5-29-07	8-16-07	SCA	S130-190
Joel Matthews	8-27-07	11-15-07	SCA	

SCA= Student Conservation Associate (volunteer)

MANAGEMENT OBJECTIVES AND MONITORING RESULTS 2007

Please see attached appendices for data analysis for BAND, ELMA, and PECO.

FIRE ECOLOGIST ACCOMPLISHMENTS AND AREA OF FOCUS

TABLE 6. Ecologist Accomplishments

Laura fell ill on July 27th, 2007 and did not return to work until November 11th, with a part time schedule. Laura is not fully recovered from illness, but will continue to work more hours as her condition improves.

From July-November, 2007, Laura talked with the crew leader (Beth) each week to ensure plot work was being completed and to answer questions. Laura assisted the field crew leader with planning throughout the field season and also accomplished some requested data analysis for ELMA during this time of illness.

Category	Percent Time	Accomplishments/Focus Areas
Planning/Projects	30%	- Assisted in writing fire and resource objectives for BAND, ELMA, PECO, and SAPU prescribed fire plans. - Created a monitoring design for grasslands at SAPU. - Created a monitoring design for grasslands at ELMA. - Wrote a proposal and request for monetary support for the Friends of Bandelier. - Finished writing ELMA's monitoring plan (with Kristi Bullock). - Continued working on Bandelier's fire history database. Includes investigating and reconciling old spreadsheets, entering data from 1202's from 1999-2007, and creating a readme sheet for future use. - Continued planning and preparation for monitoring in BAND's Project Area 9. - Assisted in the revision of Fire Management treatment plans for BAND. - Worked with field crew leader to review and update SOP's for field and office work at all parks. - Worked with field crew leader to assess and fix numerous data and program errors. - Wrote a detailed summary of possible vegetation response to prescribed fire for SAPU. - Updated and revised the fire history and Fire Ecology Program powerpoint presentation for crew members. - Updated and revised a local fire ecology and Fire Management Program presentation for Bandelier's seasonal training. - Worked with field crew leader to decipher data problems at DINO. - Updated Access plot information lists for BAND and ELMA, PECO, and SAPU
GIS	20%	- Supported GIS work for BAND's Fire Management Program, including treatment plan maps, project area maps, scope of work maps, etc. - Gathered, deciphered, and organized all the GIS files for BAND, ELMA, PECO, and SAPU. - Completed all the GIS work for new plot installations at BAND, ELMA, PECO, and SAPU.
Presentations/posters Interviews	5%	Presented Bandelier's local fire history and the Fire Ecology Program to fire ecology crew.

		- Presented Bandelier's Fire Management Program at Bandelier's seasonal training. - Created several posters for the Fire Management Leadership Board.
NPS Meetings/ Task Groups	5%	- Annual Fire and Resources Management Meeting at Bandelier. - Annual Fire Meeting at PECO.
Interagency Work	1%	Attended East Jemez Resources Council meetings.
Fire Assignments	0%	None
Fieldwork	2%	Assisted with fieldwork at BAND
Research	0%	None
Data Entry	0%	None
Data Conversion	10%	Worked on FEAT issues for BAND, ELMA, and PECO. Examples of issues: subsample re-naming.
Data Analysis and Reports	16%	- Re-analyzed BAND Project Area 9 PRE data to develop and refine fire and resource management objectives. - Analyzed data for BAND and ELMA for prescribed fire planning purposes. - Wrote end of the season field reports for PECO, detailing fieldwork completed, methodologies, and location of plots. - Analyzed data and created a series of posters for the Fire Management Leadership Board. - Completed Annual Report for BAND, ELMA, PECO, and SAPU. - Analyzed and summarize Los Alamos Kids Group data and created graphics to present to teachers.
Supervision/Admin	10%	Directly supervised GS-7 field crew leader and assisted with the conversion from Jenny Byington to Beth Gastineau.
Training	<1%	S 130-190 refresher.

FIRE EFFECTS CREW ACCOMPLISHMENTS AND AREA OF FOCUS

TABLE 7. Fire Effect Crew Accomplishments

Category	Percent Time	Accomplishments\Focus Area
FMH plots and all other plot work (except WUI)	50%	Completed all necessary planning and field work at BAND, ELMA, PECO, and SAPU (161 plots). Installed and took photopoints at BAND and PECO. Assisted USGS fieldcrew with field work related to long-term studies in a paired watershed study.
WUI plots	0%	None
CBI plots	0%	None
Fire Assignments	8%	3 prescribed fire (3 crew members). 2 week + fire assignment (2 crew members) Various assignments to work on local suppression fires and fill in on BAND's engine (3 crew members).
Data Entry	24%	Entered all 2007 field data and some data leftover from the previous seasons.
FEAT related Issues	2%	Problems encountered data access and data entry.

Category	Percent Time	Accomplishments\Focus Area
Supervision/Admin	15%	Leadership duties, travel, payroll, updating schedules, etc.
Training	1%	S 130, S 190, fire refreshers.
Public Outreach	0%	None

OPTIONAL SECTION

- See attached appendices for data analysis, graphs, plot lists, monitoring type description sheets, and associated information for BAND, ELMA, PECO, and SAPU.