

2011 Fire Ecology

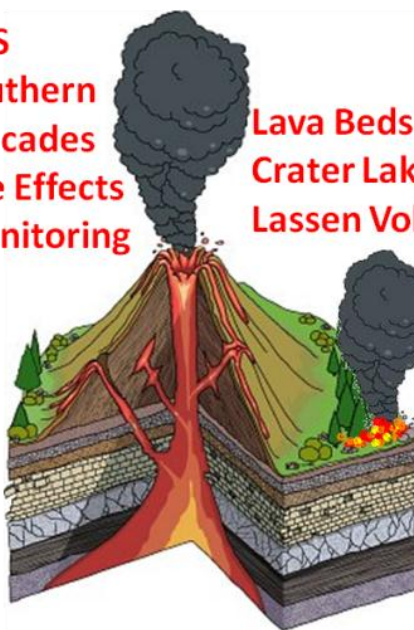


Annual Report



NPS
Southern
Cascades
Fire Effects
Monitoring

Lava Beds NM,
Crater Lake NP,
Lassen Volcanic NP



A. Summary

2011 was another busy year for the Southern Cascades fire effects program. The crew completed 161 plots in 4 park units and assisted in fire operations in our core parks. By the end of the fiscal year, the crew had spent 3 weeks on wildland fires in CRLA and managed to enter and QC all the data for 2011. Their season was extended into October by assisting CRLA with wildland fires and thinning projects as well as an Rx burn in LABE. Due to vacancies in the Klamath fire effects program, the crew this year took on the plot work of an additional park (Whiskeytown NRA) for one pay period. In exchange for this an additional seasonal was thrown our way.

Along with fire ecologist Calvin Farris and lead monitor Todd Erdody, the crew consisted of Mark Williams, who returned for a second season, Christina Barba and Forest Taipale. Forest left us midway through the season for a permanent job with the Fremont-Winema NF while Mark and Christina were on until mid-October.



Todd Erdody, Mark Williams, Forest Taipale, Christina Barba at Cloudcap Overlook, CRLA.

Lava Beds National Monument (LBE):

Before the arrival of the crew, Todd was assisted by the engine crew in installing 5 modified brush plots (with tree data) in 2 thinning units (Hippo Butte and Bearpaw Butte). Calvin and Todd also initiated a tree-girdling project to assess methods for killing mountain mahogany (*Cercocarpus ledifolius*) without saws. Once the crew was on in late May, we read 2-year reads on the Valentine Rx and 5-year reads on the Big Nasty Rx. Additionally 2 plots in an unburned portion of the monument (Golddigger Pass) were re-located and read 22 years after initial installment.

Lassen Volcanic National Park (LAVO):

Our first of two trips to LAVO occurred between July 5-11 to read 16 forest plots burned in 1994 in Warner Valley. The area was scheduled to be treated soon so we read them off schedule at year-17. Half of these plots had been rejected in the past for various reasons but still contained useful data, so we resurrected them and read them along with the other plots that were active but had been ignored since 1999.

On Aug.1 we headed back to LAVO to re-read 18 plots in the Stonehenge area in preparation for thinning. We also read 10 aspen plots scattered throughout Stonehenge, Lost Creek and the Devastated Area.

Crater Lake National Park (CRLA):

Our first of two trips to CRLA was from July 18-24 to read 1-year reads from the Phoenix wildfire and 10-year reads on the TC-1 Rx and TC-2 Rx of 2001. The latter plots are the first 10-year reads in CRLA so we are excited about analyzing that data. We had assistance from the botany crew for one day and in turn assisted them in rare plant surveys on the Crater Lake rim. We were also prodded by millions of mosquitoes to finish the plots fast!

Our second trip to CRLA started on Aug. 15th for 5-year reads of the Bybee WFU. We initially scheduled this trip earlier but the snow wasn't melting fast enough. The day that we completed all of our plot work for the year (except for 2 installs in an Rx unit), CRLA received lightning and we spent the next 3 weeks on the resulting fires. On September 14th and 15th we installed two forest plots in the Upper Panhandle Rx unit.

Whiskeytown National Recreation Area (WHIS):

We worked in WHIS from June 20-27 where we read post-thinning rapid assessment plots in Brandy Creek, 21-year reads in Coggins Park, 6-year reads on the Queen Mary Rx and the installation of 20 photo-points in the eastside thinning units. Poison oak was only an issue with the photo-points and celebrations ensued once those plots were completed.

Fire operations:

All crewmembers participated on wildfires and prescribed fires in 2011, except for Forest who left before any fires started. In March, Todd assisted the US Fish and Wildlife Service with a prescribed burn on the Modoc NWR and was happy to be holding a drip torch for a day. Fire season arrived late in our region but got going after a lightning storm in CRLA on August 20th. This complex of fires, known as the Red Cone complex would consist of three fires started by the storm as well as additional fires ignited in the following weeks. Mark and Christina served as ICT5 trainees on 2 of these fires while Todd acted as the ICT5 for both. Christina got her ICT5/FFT1 taskbook signed off on the Red Cone fire. Once the fires grew a little more, the

complex transitioned to an ICT4 and eventually to an ICT3 when more lightning arrived. Mark got signed off on his ICT5 taskbook on one of these later ignitions, the Klamath Ridge fire. At various times, crewmembers played the roles of FEMO, FFT1 and HECM on 9 separate fires in the complex.

The crew participated on 1 prescribed fire in LABE, the Crescent Rx. Todd was excited to be in the role of FIRB (t), Christina was FEMO and Mark was FFT2, assisting the park engine and handling a drip torch. After ignitions were complete, Todd and Christina stayed on the burn as FEMOs while Mark was dispatched to help the Modoc NF with some of their burns as a FEMO for 2 days. At the end of October, a week after the crew was laid off, Todd headed down to LAVO as a FEMO on the Summertown Rx.

Table 1. Fire Effects Plot Workload (2011) and Total Plots Installed

Park	Monitoring Unit	Plot Type (FMH Brush plot, photo point, CBI, etc.)	Pre-burn 2011	Immed. Post 2011	Postburn (1-20 yrs) 2011	Annual Total (2011)	Total Plots
Lava Beds	Perennial Bunchgrass	FMH Grass plot	-	-	2	2	24
Lava Beds	Sagebrush Steppe	FMH Brush plot	5	-	22	27	88
Lava Beds	Ponderosa Pine	FMH Forest plot	-	-	5	5	18
Lassen Volcanic	Mixed Conifer (White Fir)	FMH Forest plot	-	-	15	15	36
Lassen Volcanic	Ponderosa Pine	FMH Forest plot	-	-	1	1	5
Lassen Volcanic	Greenleaf Manzanita	FMH Brush plot	14	-	3	17	17
Lassen Volcanic	Aspen	FMH Brush plot	11	-	-	11	33
Crater Lake	Ponderosa Pine	FMH Forest plot	-	-	14	14	20
Crater Lake	Mixed Conifer (White Fir)	FMH Forest plot	2	-	2	4	24
Crater Lake	Lodgepole Pine	FMH Forest plot	-	-	4	4	9
Crater Lake	Mountain Hemlock	Modified FMH Forest plot	-	-	18	18	18
Crater Lake	Lodgepole Pine	Modified FMH Forest plot	-	-	4	4	4
Whiskeytown	Mixed Conifer	FMH Forest plot	-	-	9	9	18
Whiskeytown	Ponderosa Pine	Rapid Assessment plot	-	-	7	7	13
Whiskeytown	Canyon Live Oak	Rapid Assessment plot	-	-	2	2	2
Whiskeytown	Tan Oak	Rapid Assessment plot	-	-	1	1	3
Whiskeytown	Douglas Fir	Photo point	3	-	-	3	3
Whiskeytown	Canyon Live Oak	Photo point	5	-	3	8	8
Whiskeytown	Deciduous Oak	Photo point	4	-	3	7	7
Whiskeytown	Mixed Pine/Oak	Photo point	2	-	-	2	2
Total			46	0	115	161	352

Table 2. Fire Ecology Staffing 2011

Ecologist and Monitors	Starting Date	Ending Date	# of Pay Periods	READ Qualified (Yes or No)	Training and Development
Calvin Farris	1/1/11	12/31/11	26	Yes	
Todd Erdody	1/17/11	12/3/11	23	No	RT-271, FIRB (t) assignment
Mark Williams	5/22/11	10/18/11	10.5	No	ICT5 taskbook completed
Christina Barba	5/18/11	10/18/11	11	No	S-234, RT-271, ICT5/FFT1 taskbook completed
Forest Taipale	5/22/11	7/25/11	5	No	S-290, RT-271

Complete the following summary table for each monitoring unit for which analysis is available (Table 3). Monitoring results should include time frame, confidence interval, and sample size. An example from Sequoia-Kings Canyon is provided to illustrate how to complete the table. Note the column indicating the year the analysis for that monitoring unit was last completed.

Table 3. 2011 Management Objectives and Monitoring Results

All results shown are 80% confidence intervals of the mean. Fuel reduction objectives/results are mean percent reduction from pre-burn to immediate post-burn. Stand density objectives/results are for five-year post-burn mean stand density. An underlined number of plots indicates that the minimum sample size has been attained for that variable.

Monitoring Unit	Management Objective (Restoration)	Monitoring Results (XX% confidence interval)	Objective Achieved?	Year Last Analysis Completed

B. Fire ecologist accomplishments and areas of focus

This section deals with roles and functions of the ecologist. Identify accomplishments and/or focus areas along with a rough estimate of the amount of time spent in these areas (see table format and example below). This includes planning documents produced or reviewed (e.g. fire management plans, monitoring plans, prescribed fire or mechanical treatment plans, etc.), presentations given and audience, meetings and task groups attended, contracts reviewed, interagency collaboration efforts, volunteer hours managed, and scientific or research publications produced.

Table 4. Fire Ecologist 2011 Accomplishments/Focus Areas

Category	Percent Time	Accomplishments and/or areas of activities
Planning	25%	• LAVO Northwest Gateway; field and prescription and management plans • CELE restoration/fuels reduction, LABE • Whitebark restoration plan (CRLA) • Aspen management plan • LABE, CRLA, LAVO FMP revisions/editing/compliance • LABE RSS) and vegetation management plan • Five-year fuels planning at CRLA, LAVO, LABE • Resource condition assessments - CRLA and LABE
Wildland fire support	15%	• WFDSS, fire behavior, suppression, and support and planning for Red Cone, Red ConeII, Oasis, Trail, and Timber Crater Fires on NPS lands; READ for Cougar and Lava Fire on USFS land.
Research	20%	• Field and data analysis for 2nd season of LABE Rem. Sens. project • Proposal writing (Six RSS and Fire proposals for three parks) • Mahogany fuels reduction/restoration trials (field implementation) • Analyzed demography data for pine-ecotone project • Implemented research and monitoring protocol for Northwest Gateway units • Assist Ken Gerow with data analysis tools spreadsheets
Data Analysis	20%	• Analyzed Northwest Gateway stand data to develop unit prescriptions • Analysis and Field for Pine Ecotone project • Completed • Historic aerial photo analysis for Lassen. • FMH summaries for parks
Training/Teaching	5%	• Section instructor for S495 Geospatial Fire Applications in Tucson (and online pre-work lessons) • Took Fire Behavior Specialist Training, Refresher
Supervision/Admin	5%	• Supervised lead fire effects monitor and seasonals • Supervised two SCAs and parks • General administrative and accounting duties for program.
Presentations	5%	• Restoration symposium, Bend, OR • HSU presentation • Ecologist Meeting • WFDSS/FSPRO Workshops, WFTC • UA/NPS Rincon Meetings
Outreach / Misc	<1%	•
Prescribed fire support	5%	• Rx fire monitoring and support for three burns in network and two on Winema NF

C. Fire effects crew accomplishments and areas of focus

Table 5. Fire Effects Crew 2011 Accomplishments/Focus Areas

Category	Percent Time	Notes
FMH plots	40%	
WUI plots	0	
CBI plots	0	
Other plot work	5%	Rapid assessment plots and photo-points in WHIS.
Wildfire assignments	10%	Lead served as ICT5, FFT1, FEMO and HECM on 3 wildland fires in CRLA. Crewmembers served as ICT5 (t), FFT1, FEMO and HECM on 9 wildland fires in CRLA. 2 crewmembers completed ICT5 taskbooks.
Prescribed fire projects	5%	Lead was FIRB (t) on one Rx fire in LABE, FEMO on one Rx fire in LAVO and FFT2 on one Rx with the F&WS. Crewmembers served as FEMO and FFT1 on one Rx fire in LABE and 2 Rx fires on the Modoc NF.
Non-fire fuels projects	<5%	Lead was a FALA on a thinning project in LABE. One crewmember was a FALA on a thinning project in CRLA.
Travel out-of-park for plot or project work	<5%	2 trips to LAVO, 2 trips to CRLA, 1 trip to WHIS and many day trips to LABE
Data entry	15%	All data entry for 2011 complete
Data analysis	<1%	
Supervision/Admin	5%	Lead monitor hired and supervised 3 monitors; misc travel and time paperwork
Training	5%	Crew had refresher training. One crewmember had S-290 and another crewmember had S-234. Lead and two crewmembers had RT-271.
Miscellaneous	4%	

D. Additional Program Information

****Note that instead of a separate Annual Report Supplement (Excel spreadsheet) we are adding much of the information from the spreadsheet here in the body of the annual report.**

Please complete the new tables below which contain the information from the supplement that we feel is valuable to compile on an annual basis to help assess the fire ecology program workload. Everglades National Park is used as a fictitious example in the table.

Table 6. Planning - 2011

Park	Does Park have written DFCs? (yes or no)	Date Park-level Monitoring Plan completed (or revised)	Total # of Project- or Community-level Monitoring Plans (not just 2011)	Assisted with how many BAER plans in 2011?
Lava Beds				
Lassen Volcanic				
Crater Lake				

Table 7. Monitoring - 2011

Park	% 2011 Data Entered	% 2011 Data Quality Checked	# Prescribed Fires Monitored*	# Non-fire Fuels Treatments Monitored*	# Wildfires Monitored*	# BAER Treatments Monitored*
Lava Beds	100%	100%	0	2	0	0
Lassen Volcanic	100%	100%	0	0	0	0
Crater Lake	100%	100%	0	0	0	0
Whiskeytown	100%	100%	0	0	0	0

* Number of treatment units with treatment effects monitoring conducted. Include pre-burn and post-burn monitoring but not burn-day monitoring.

Table 8. Communicating Results - 2011

Park	# of Project Monitoring Reports completed in 2011	# of Annual meeting(s) with Park staff	# of Formal presentations of results	Do you use Minitab?*
Lava Beds				
Lassen Volcanic				
Crater Lake				

* This information will help to assess Minitab multi-user license needs.

Table 9. Research - 2011

Park	Are research needs identified in FMP or Monitoring Plan? (yes or no)	# of Proposals Submitted in 2011	# of Proposals Funded in 2011	# of Research Projects Supported in 2011*	Additional Comments
Lava Beds					
Lassen Volcanic					
Crater Lake					

*Number of funded research projects, new or ongoing, supported by the fire ecology program including logistical info or support, staffing, etc.

E. 2012 Direction

What are program plans for the near future? This section can be brief and include changes to focus areas, any approved changes to monitoring protocols as a result of a program review, or plans to address future challenges (e.g. budget and staffing changes, travel caps, etc.).

F. Optional Information

To help in the ongoing effort to improve FFI, please include any feedback or suggestions here based on your experiences using FFI.

Also, include any additional material not already covered:

- Alternative monitoring activities descriptions
- Challenges facing monitoring program
- Unique solutions to problems
- Collaboration with natural resource managers, other federal agencies, or research institutions
- Graphics and/or tables of data analysis results presentations
- Photographs of monitoring and fire activities

INSTRUCTIONS FOR UPLOADING 2011 ANNUAL REPORT

1. Save your report as a PDF file using the following file naming convention “2011 *Park/Network Name* Annual Report.pdf”.
2. Go to the NPS Fire Ecology Sharepoint site (<http://npsfamshare.nps.doi.net/wildlandfire/firescience/fireecology/default.aspx>). In Fire Ecology Documents, upload your report to the 2011 Park and Network Fire Ecology Program Annual Reports folder.
3. Please e-mail your regional ecologist, Nate Benson, and MaryBeth Keifer to let us know when you get your report uploaded.

Call MaryBeth Keifer (603-795-2333) or Nate Benson (208-387-5219) if you have any questions or problems.