



**National Park Service  
Fire Ecology Annual Report  
Calendar Year 2007  
Klamath Cascade Network**



2007 Klamath Cascade Fire Effects Crew: Jeremy Thompson, Carla Minniti, Ryan Rupert, Jasper Peach and Becky Smith. Not pictured: Cascades Network Fire Ecologist Calvin Farris and Klamath Network Fire Ecologist Jen Beck.

## Summary

The 2007 season was a whirlwind learning experience for the Klamath Cascade Network fire effects crew. The new crew lead, Becky Smith, started at the end of May while the acting crew lead, Julie Dubose prepared to leave. After her departure in early June, the lead, one returning seasonal crewmember and three new seasonal crewmembers remained. Calvin Farris provided direction and leadership as the Fire Ecologist for the east side parks (Crater Lake NP, Lava Beds NM and Lassen Volcanic NP) while the west side Fire Ecologist position was vacant during the field season until Jen Beck arrived in October.

The crew spent one pay period at each park within the network, with the exception of Lassen where they spent two pay periods, and Oregon Caves NM which was not visited during 2007. The crew managed to accomplish an amazing amount of work considering the high turn over rate. All scheduled plot work was completed for every park except Redwood, in addition to seven long term fuel assessment plots and seven aspen regeneration plots at Lassen. Unfortunately field work at Redwood suffered due to the travel schedule, employee training and lack of direction because of the vacant fire ecologist position.

Somewhere between traveling from park to park to collect field data, the crew managed to squeeze in a little training and a few fire assignments. The first pay period of the season was spent by seasonal crewmembers trying to complete all of the necessary trainings involving credit cards and use of computers, while the former acting lead tried to spew as much information about the program to the new crew lead as was humanly possible. In addition two crewmembers attended a week long class of S-130 and S-190 and all crewmembers attended four days of a Redwood Fire Orientation. These four days were spent learning about other aspects of the fire program at Redwood, including getting everyone up to speed on time, travel, engine operations, fuel projects, fire effects plots and the annual fire refresher. The fire effects crew contributed by taking fire personnel into the field to complete hands on training of FMH plot protocols. This helped give everyone an understanding of what is going on within the fire program. It also cleared up the many questions from co-workers about what the fire effects crew actually does while in the field, and how they contribute to the fire program. During the fire season one crewmember assisted the engine as a FFT2 for an off-park assignment and the lead with one crewmember took an assignment to Yellowstone NP as FEMOs. After things slowed down in the fall two crewmembers completed the S-290 self study and S-212 held in Redwood.

During the field season the crew was assisted by the Redwood vegetation crew who provided some much need assistance with plant identification in the Bald Hills for one day. While in Lava Beds they were joined by a resource management SCA and a vegetation specialist for two days, who also provided some much needed direction on plant identification. The Point Reyes fire effects crew helped the Klamath Network crew immensely at Crater Lake for two pay periods by reading CBI and rapid assessment plots on the Bybee WFU Complex of 2006, monitoring the Cornerstone prescribed fire, and completing immediate post burn reads on plots within the burned unit.

During the fall the lead and two crewmembers participated in prescribed burn operations at Redwood. They spent numerous hours collecting weather data leading up to the burns and helped during the burns by acting in roles ranging from FEMO to FIBO.

Although there was large turnover in the past year for the crew everyone did a great job of learning quickly, being flexible and patient, as the lead learned the ropes of the Klamath Cascade Network.

**Table 1. Fire Effects Plot Workload 2005**

| <b>Park</b>  | <b>Monitoring Unit</b>  | <b>Type of Plot (FMH, photo point, other)</b> | <b>Pre-burn</b> | <b>Immed. Post</b> | <b>Postburn (1-20 yrs)</b> | <b>Total Plots</b> |
|--------------|-------------------------|-----------------------------------------------|-----------------|--------------------|----------------------------|--------------------|
| <b>CRLA</b>  | Lodgepole Pine – Closed | FMH Forest                                    | 1*              | (1)                |                            | 2                  |
|              | Lodgepole Pine – Mixed  | FMH Forest                                    | 1*              | (1)                |                            | 2                  |
|              | Lodgepole Pine - Open   | FMH Forest                                    |                 | (1)                |                            | 1                  |
|              | Mountain Hemlock        | Rapid Assessment                              |                 | 4(10^)             |                            | 14                 |
|              | Lodgepole Pine          | Rapid Assessment                              |                 | 4^                 |                            | 4                  |
|              | Bybee Complex 2006      | CBI                                           |                 | 8 (90)             |                            | 98                 |
| <b>LABE</b>  | Ponderosa Pine          | FMH Forest                                    |                 |                    | 2                          | 2                  |
|              | Perennial Shrub         | Modified FMH Shrub                            |                 |                    | 8, 4^                      | 12                 |
|              | Aspen                   | Modified FMH Forest                           |                 |                    | 1                          | 1                  |
| <b>LAVO</b>  | White Fir               | FMH Forest                                    |                 |                    | 11                         | 11                 |
|              | Grand Fir               | FMH Forest                                    |                 |                    | 2                          | 2                  |
|              | Ponderosa Pine          | FMH Forest                                    |                 |                    | 3                          | 3                  |
|              | Lodgepole Pine          | FMH Forest                                    |                 |                    | 3                          | 3                  |
|              | Jeffrey Pine            | FMH Forest                                    |                 |                    | 2                          | 2                  |
|              | Mixed Conifer           | Fuel Assessment                               |                 |                    | 7                          | 7                  |
|              | Aspen                   | Aspen Regeneration                            |                 |                    | 7                          | 7                  |
| <b>ORCA</b>  | No work in 2007.        |                                               |                 |                    |                            |                    |
| <b>REDW</b>  | Mixed Prairie           | FMH Grass plot                                |                 |                    | 2                          | 2                  |
|              | White Oak Woodland      | FMH Forest                                    |                 | 2                  |                            | 2                  |
|              | Redwood                 | FMH Forest                                    |                 |                    | 1                          | 1                  |
|              | 2 <sup>nd</sup> Growth  | Radial                                        | 21**            | 21                 |                            | 42                 |
|              | Douglas Fir             | Radial                                        | 4               |                    |                            | 4                  |
| <b>WHIS</b>  | Ponderosa Pine          | FMH Forest Plot                               |                 |                    | 2                          | 2                  |
|              | Whiteleaf Manzanita     | FMH Forest Plot                               |                 |                    | 3                          | 3                  |
|              | Black Oak               | FMH Forest Plot                               | 1               |                    |                            | 1                  |
| <b>Total</b> |                         |                                               | <b>28</b>       | <b>39 + (103)</b>  | <b>58</b>                  | <b>228</b>         |

\* These plots were installed by PORE fire effects crew in 2006, REDW crew went back to clear up issues (tags, photos...).

( ) Indicates plots installed and/or read by PORE fire effects crew, data entry was done by Klamath Cascade crew.

^ Indicates plots that were installed POST fire.

\*\* Indicates plots that were installed by the REDW forestry crew in 2006, and revisited by the fire effects crew this season to complete vegetation transects before unit was burned.

**Table 2. Fire Ecology Staffing 2007**

Crew leader Becky Smith's first day in the office was also the first day for three seasonal crewmembers. Carla Minniti returned for her second season, while Ryan Rupert, Jeremy Thompson and Jasper Peach were new hires. Julie Dubose, the former acting crew lead left two weeks into the season for greener pastures after three years as the assistant crew lead and one year as the acting crew lead. Peach worked through August until the start of school. Thompson ended earlier than expected in August after deciding to return to school and Rupert resigned in September after accepting a job on the LAME exotic plant management team. This left Smith and Minniti, with Peach working intermittently to finish up REDW field work and data entry for the year. The new east side Fire Ecologist, Jen Beck, started in early October.

| Staff           | Starting Date | Ending Date | # of Pay Periods | Training and Development                                                     |
|-----------------|---------------|-------------|------------------|------------------------------------------------------------------------------|
| Jen Beck        | Oct 16        | Dec 31      | 5.5              |                                                                              |
| Calvin Farris   | January 1     | Dec 31      | 26               |                                                                              |
| Becky Smith     | May 13        |             | 16               | FIBO assignment in REDW                                                      |
| Julie DuBose    | April 1       | June 9      | 5                |                                                                              |
| Carla Minniti   | May 21        | Nov 2       | 12               | FEMO assignment in YELL and REDW to finish taskbook                          |
| Ryan Rupert     | May 21        | Sept 21     | 9                | S-212, S-290, REDW engine and fuels crew development                         |
| Jeremy Thompson | May 21        | August 18   | 6.5              | S-130, S-190                                                                 |
| Jasper Peach    | May 28        | August 18   | 6                | S-130, S-190, FFT2 development with off-park engine assignment, S-290, S-212 |

**Table 3. Management Objectives and Monitoring Results 2007**

| Monitoring Unit                                    | Management Objective (Restoration)         | Monitoring Results (XX% confidence interval) | Objective Achieved?                                            |
|----------------------------------------------------|--------------------------------------------|----------------------------------------------|----------------------------------------------------------------|
| Big sagebrush (curl leaf mountain mahogany) (LABE) | <20 % mortality of isolated ponderosa pine | ongoing                                      | n/a                                                            |
|                                                    | 15-60% new openings in mahogany            | 10% new openings                             | NO, but progress made toward the long-term veg management goal |

## Fire ecologist accomplishments and area of focus

| Category                  | Percent Time | Accomplishments and/or areas of activities                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning                  | 20%          | <ul style="list-style-type: none"> <li>• Updates/revisions to FMPs at CRLA, LAVO, LABE</li> <li>• Five year burn plans at LAVO and LABE</li> <li>• Mechanical fuels treatment</li> <li>• Classification development for veg mapping projects</li> <li>• Assist in development of exotic plant plans</li> <li>• Juniper removal / historic heritage landscape restoration</li> <li>• Sensitive habitat mapping</li> <li>• Fire risk assessments</li> </ul> |
| Presentations             | 5%           | <ul style="list-style-type: none"> <li>• Manzanita Lake project field trips</li> <li>• RAC funding committee progress report</li> <li>• Project overview at ecologist conference</li> <li>• Fire ecology for planning at two park staff meetings</li> </ul>                                                                                                                                                                                               |
| NPS Meetings/ task groups | 2.5%         | <ul style="list-style-type: none"> <li>• Region FMO and Ecologist conference</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   |
| Interagency work          | 2.5%         | <ul style="list-style-type: none"> <li>• Fuels/veg mapping with USFS and USFWS</li> <li>• Cross-boundary treatment planning at CRLA with USFS</li> </ul>                                                                                                                                                                                                                                                                                                  |
| Fire Assignments          | 10%          | <ul style="list-style-type: none"> <li>• Bitterroot Complex, MT</li> <li>• Lead 4-person FEMO group on Cornerstone Rx, CRLA</li> </ul>                                                                                                                                                                                                                                                                                                                    |
| Research                  | 15%          | <ul style="list-style-type: none"> <li>• Prepared six proposals in three parks with four different cooperators</li> <li>• Implemented ongoing field research in parks (aspen, bitterbrush, exotic plants)</li> <li>• Coordinated with universities and grad students on work in parks</li> </ul>                                                                                                                                                          |
| Data entry                | 0            | Monitors completed data entry                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Data Conversion           | 0            | Lead monitor completed data conversion                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Data analysis             | 0            | Did not complete any data analysis                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Supervision/Admin         | 10%          | <ul style="list-style-type: none"> <li>• General administrative work</li> <li>• Supervised volunteers, SCA's and bio-techs in various field projects work at CRLA, LAVO and LABE</li> <li>• Oversaw work of two different Fire Effects crews in three parks</li> </ul>                                                                                                                                                                                    |
| Training                  | 5%           | <ul style="list-style-type: none"> <li>• Resource advisor</li> <li>• Firefighter refresher and safety refreshers</li> <li>• Spatial analysis</li> </ul>                                                                                                                                                                                                                                                                                                   |
| Miscellaneous             | 30%          | <ul style="list-style-type: none"> <li>• Bybee WFU postfire assessment and planning at CRLA</li> <li>• Implementation of commercial thinning at LAVO</li> <li>• Fuels and shrub cover gradient mapping LABE</li> </ul>                                                                                                                                                                                                                                    |

## Fire effects crew accomplishments and area of focus.

| Category                            | Percent Time | Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FMH plots                           | 26%          | Time includes travel time (5%) to plots in all parks.                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mechanical Treatment plots          | 0%           | No mechanical treatment plots were read this year.                                                                                                                                                                                                                                                                                                                                                                                                                |
| CBI plots                           | 2%           | ~98 CBI plots were read by the PORE crew whose time is not included in the 2%, while the REDW crew read four                                                                                                                                                                                                                                                                                                                                                      |
| Other plot work                     | 12%          | This includes LAVO aspen plots, LAVO fuel plots, CRLA Bybee plots and REDW DA 2 <sup>nd</sup> Growth and Upper Elk doug fir plots. The PORE crew also installed ten Bybee plots; their time is not included in the 12%.                                                                                                                                                                                                                                           |
| Fire Assignments                    | 15%          | <ul style="list-style-type: none"> <li>✦ Crewmembers assisted on three prescribed fires, Upper Lyons, Little Bald Hills and DA 2<sup>nd</sup> Growth, in Redwood (FEMO, FFT2, FIBO), assisted with FEMO preparation tasks for the burns</li> <li>✦ 1 crewmember detailed for two weeks on engine (FFT2)</li> <li>✦ 2 crewmembers detailed for two weeks in YELL (FEMO, CRWB).</li> <li>✦ 1 crewmember assisted REDW engine and fuels crew for one week</li> </ul> |
| Data Entry                          | 16%          | Estimated amount of time spent entering data from paper to PC                                                                                                                                                                                                                                                                                                                                                                                                     |
| Data Management and Conversion      | 6%           | Time spent preparing and organizing data before and after travel for trips to other parks.                                                                                                                                                                                                                                                                                                                                                                        |
| Data Analysis                       | 0%           | No analyses were done by the Lead.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Supervision/Admin                   | 13%          | Hopefully this will decrease as the Lead becomes more familiar with REDW procedures!                                                                                                                                                                                                                                                                                                                                                                              |
| Training & Professional Development | 5%           | This includes winter/spring fire-related trainings, annual fire refresher, field training for new crewmembers, S-290, S-212 and on-line training.                                                                                                                                                                                                                                                                                                                 |
| Miscellaneous                       | 5%           | This is everything else, such as PT.                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Optional.

A decision that has been discussed since 2001 was finally made this fall to split the crew between eastside and westside parks. A meeting was held with the lead, both fire ecologists and the regional fire ecologist at the end of October. It was decided that the crew would be split in half with the current lead staying in Redwood NP (Klamath Network) and a new lead being hired on the eastside (Southern Cascades Network). The seasonal money was split down the middle as will the associated gear and equipment to help the crews operate. The new Southern Cascades crew will be co-located with the Fire Ecologist in Klamath Falls. This split will dramatically cut down the time spent on crew travel from park to park which will help increase the time spent in the field collecting data and with fewer parks for each crew to juggle, the quality of data will likely increase. The close proximity of both crews helps facilitate crew intermingling to help each other out throughout the summer field season when and where needed.

There will be some challenges with the crew split during the next field season such as getting the new Lead up to speed, transferring all of the data and equipment to them and operating with small crews on each side. These challenges should be easy to mitigate as it will be the first time in many years that all positions are filled, including both Leads and Fire Ecologists. The physical placement of both Fire Ecologists in the same location as each crew will also help make the transition smoother and will help facilitate dynamic communications.