



National Park Service Fire Ecology Annual Report Utah Parks Group Calendar Year 2014

A. Summary

The Southern Utah Parks Group Fire Effects Program served Zion and Bryce Canyon National Parks during the 2014 season. Golden Spike NHS has been monitored in the past but due to the lack of an active prescribed burn program at that site, the assisting fire ecologist and the crew lead decided to discontinue sampling the FMH sagebrush plots there. During the 2014 field season, the crew completed all scheduled FMH plots: 30 at Zion NP and 6 at Bryce Canyon NP. They also installed and read 10 rapid assessment plots in a new fuel reduction project area at Rainbow Point in Bryce Canyon NP. The crew spent 7 days camped at Bryce to complete fieldwork. This year the field staff consisted of the returning fire effects lead, Katie Walsh; the returning assistant lead fire effects monitor, Liz Dodson; and two crewmembers, Meredith Talbert and Brian Howard. Fire payroll assistant, Stephanie Trimmer, and several other park employees were trained on monitoring techniques. Liz Dodson did an excellent job at leading the crew and coordinating with fire staff during the bulk of the fire season while Katie Walsh was on detail at Grand Teton NP. As the assistant lead, Liz took on several above and beyond duties and activities including coordinating with other Zion fire crews and rotating duty officers.

All crewmembers were able to participate in at least one detail assignment and worked on a wide range of wildland fire skills. Crewmembers Meredith and Brian attended fire school and received their red card in May. Brian attended S212 saw training at Bryce Canyon in June. Liz attended local resource advisor training and was able to add READ trainee to her red card. Unfortunately, she was unable to get out on a READ assignment. Liz was also able to attend the BLM sponsored training titled “Measuring and Monitoring Plant Populations” in Billings, MT. This week long course was a great introduction for Liz into the full process of setting up and completing a monitoring project. From June until August, Katie did a 120 day detail in Grand Teton NP and worked with the Teton Interagency Fire Ecologist, Diane Abendroth. The fire effects program was also able to continue supporting plant identification training with assistance from the Zion Natural History Association and the Zion vegetation program. All crew members participated in 20 hours of plant identification and herbarium skills training.

Despite the unusually dry winter and early spring in Zion National Park and the surrounding Color Country area, the number of local wildfires was low this year with just 6 wildfire starts. In June the 1000 hour fuels were monitored at 2% and all local units were in severity by July. Zion was in severity for several weeks, but received an abundance of monsoonal moisture in August and September. Although it was a slow fire season in Color Country all crew members acquired some fire experience. Liz went out on a Color Country Interagency Type 2 crew as FFT1 trainee. Brian and Meredith went out on a local NPS Type 2 hand crew called “Zion Regulars” as crew members. Both benefited from learning about extended fire assignments while working with fellow Zion fire employees. The fire effects crew also assisted the Zion wildland fire engines with several small fires in Zion NP and the local Color Country Interagency Area.

The Southern Utah Parks Group entered into a one-year agreement this year with Grand Canyon National Park (GRCA) to obtain professional level fire ecology support from the GRCA Fire Ecologist, Windy Bunn, during the transitional period to the future fire management organization. The agreement is designed to be evaluated on a yearly basis until a permanent solution to the vacant Southern Utah Parks Group Fire Ecologist position is finalized. Activities performed by the GRCA Fire Ecologist in support of the Southern Utah Parks Group are summarized in section C of this annual report.



Fire Effects Crew responding to the North Fork Fire.

Table 1. Fire Effects Plot Workload (2014) and Total Plots Installed

Park	Monitoring Unit	Plot Type (FMH Brush plot, photo point, CBI, etc.)	Pre-burn	Immed. Post	Post-burn (1-20 yrs.)	Annual Total	Total Plots
Zion	Ponderosa Pine	FMH Forest Plot	-	-	6	6	19
Zion	Sagebrush	FMH Brush Plot	-	-	5	5	20
Zion	Gambel Oak	FMH Forest Plot	-	-	4	4	12
Zion	Juniper Woodland	FMH Forest Plot	-	-	3	3	8
Zion	Aspen	FMH Forest Plot	-	-	9	9	10
Zion	White Fir	FMH Forest Plot	-	-	3	3	10
Zion	Lodge Thinning	Photo Point	5	5	-	5	5
Bryce	White Fir	FMH Forest Plot	-	-	-	-	18
Bryce	Ponderosa Pine	FMH Forest Plot	-	-	6	6	23
Bryce	Black Sage	FMH Brush Plot	-	-	-	-	7
Bryce	Dave's Hollow RX	Tree Density Ponderosa Pine	-	-	-	-	15
Bryce	Dave's Hollow RX	Photo Points	-	-	-	-	3
Bryce	Lodge Thinning	Photo Points	-	-	7	7	7
Bryce	Rainbow Thinning	Tree Density White Fir	10	-	-	-	10
Total	---	All Plot Types	15	5	48	68	167

Table 2. Fire Effects Staffing 2014

Ecologist and Monitors	Starting Date	Ending Date	# of Pay Periods	READ Qualified (Yes or No)	Training and Development
Katie Walsh Lead Monitor	1/28/2014	11/14/2014	20	Yes	Red-card refresher, detail to GRTE
Liz Dodson Assistant Lead Monitor	4/7/2014	9/30/2014	12.5	No	Botany training, Red-card refresher, READ training, measuring and monitoring plant populations training, initiate FFT1 taskbook
Brian Howard Monitor	5/5/2014	9/30/2014	10.5	No	S190, S130, L180, I100, S212, botany training
Meredith Talbert Monitor	5/5/2014	9/30/2014	10.5	No	S190, S130, L180, I100, botany training



Non-fire Zion employees assisted the fire effects crew with data collection and learned a couple things about our program.

Table 3. Management Objectives and Monitoring Results

Data analyzed in 2009 and 2011 are available in past program reports. Due to the lack of a full-time fire ecologist, management objectives and data quality issues have not been addressed for a number of years. Updated monitoring results will be available when management objectives are clarified and the data quality issues have been resolved.

B. Program Information

Table 4. Planning - 2014

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 2014)	Assisted with how many BAER plans in 2014?
Zion National Park	Yes (not refined)	2004	0	0
Bryce Canyon National Park	Yes (not refined)	2004	0	0
Golden Spike National Historic Site	Yes (not refined)	2004	0	0

Table 5. Monitoring - 2014

Park	% 2014 Data Entered	% 2014 Data Quality Checked	# Prescribed Fires Monitored*	# Non-fire Fuels Treatments Monitored*	# Wildfires Monitored *	# BAER Treatments Monitored*
Zion National Park	100	<5	3	1	0	0
Bryce Canyon National Park	100	<5	1	2	0	0
Golden Spike National Historic Site	N/A	N/A	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 6. Communicating Results - 2014

Park	# of Project Monitoring Reports completed in 2014	# of Annual meeting(s) with Park staff	# of Formal presentations of results	Do you use Minitab?*
Zion National Park	0	0	0	Yes
Bryce Canyon National Park	0	0	0	Yes
Golden Spike National Historic Site	0	0	0	Yes

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

Table 7. Research - 2014

Park	Are research needs identified in FMP or Monitoring Plan? (yes or no)	# of Proposals Submitted in 2014	# of Proposals Funded in 2014	# of Research Projects Supported in 2014*	Additional Comments
Zion National Park	Yes	0	0	2	
Bryce Canyon National Park	No	0	0	0	
Golden Spike National Historic Site	Unknown	0	0	0	

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

C. Fire Ecologist 2014 Accomplishments/Focus Areas

The Fire Ecologist position has been vacant since 2012 and there are currently no long-term plans to compensate for this vacancy. Through an annual agreement the GRCA Fire Ecologist assisted the program with the following tasks:

- 1) Evaluated the need to continue monitoring sagebrush plots at GOSP.
- 2) Developed a monitoring plan for the Rainbow Point project at BRCA.
- 3) Served as a Technical Specialist to select a contractor for the Utah Group Fire Management Plan Environmental Assessment.
- 4) Identified and prioritized data quality and data management issues in the ZION and BRCA databases that need to be addressed.
- 5) Participated in the Utah Parks Group fire program review.

Overall, the GRCA Fire Ecologist spent the equivalent of 2.5 pay periods assisting the Utah Parks Group this year.

D. Fire effects crew accomplishments and areas of focus

Table 8. Fire Effects Crew 2014 Accomplishments/Focus Areas

Category	Percent Time	Notes
FMH plots	40	30 FMH plots at Zion, 6 FMH plots at BRCA
WUI plots	0	
CBI plots	0	
Other plot work	5	Install and read 10 rapid assessment plots, 7 photo points at BRCA
Wildfire assignments	15	10 shifts spent assisting engine with severity coverage. 7 shifts on local IA Crewmembers- 1 two week assignment each on Color Country crew
Prescribed fire projects	<5	Assist Kaibab NF with RX
Non-fire fuels projects	5	Fuel moisture sample collection. This work takes a significant amount of time and was not always possible due to crew location for other work.
Travel out-of-park for plot or project work	<2	2 trips to Bryce Canyon, 2 days travel total. 2 trips Kaibab for RX
Data entry	15	Completed data entry for FMH
Data analysis	0	
Supervision/Admin	5	Lead hired and supervised seasonal employees, time and travel paperwork
Training	10	Attended refresher, botany trainings, fire school, chainsaw training,



Working with BRCA engine staff to complete Rainbow Point rapid assessment plots.



E. 2015 Direction

Budget uncertainties and lack of program support make planning for future monitoring difficult. However, the 2014 Utah Parks Group fire program review and the upcoming Fire Management Plan Environmental Assessment provide opportunities to identify focus areas for future monitoring. Monitoring needs and expectations, as well as resources (crew size, Fire Ecologist support, etc.) required to accomplish monitoring needs should be evaluated in the coming year. The Fire Ecologist support agreement with GRCA should be renewed for 2015 to ensure support for resolving the data quality issues that were identified this year and to revitalize efforts to provide timely and relevant data analysis.