

**Bear Fire Monitoring Report
Reserve and Glenwood Ranger Districts
Gila National Forest
November 14, 2008
Mike Natharius**

The Bear Fire occurred in June of 2006 and burned approximately 51,300 acres of which approximately 10,400 acres burned hot to moderate and were aerial seeded the second week of July 2006. The purpose of the seeding project was to provide ground cover for watershed protection of the areas that had experienced stand replacing fire. The seed mix used on the fire was

Common Name	Scientific Name	% of mix	seeds/sq/ft
Arizona Fescue	<i>Festuca arizonica</i>	0.94	2
Prairie Junegrass	<i>Koeleria macrantha</i>	0.96	11
Common Barley	<i>Hordeum vulgare</i>	85.16	6
Mountain Brome	<i>Bromus marginatus</i>	12.94	6

Monitoring of the seeding project and the affects of the fire on the watersheds involved was done in August 2007 (Bear Fire Monitoring Report August 16th 2007) and again in October 2008.

On October 21st Reserve District personnel Aaron Baldrige, Jesarey Barela and myself performed four Paced transects on seeded areas of the Bear Fire on the T Bar Allotment. One site was located in the Bearwallow pasture and the remaining three were in the Negrito Pasture. On October 22nd District Personnel were unavailable and I performed two Paced transects one in the Bearwallow Pasture and one off of the Bursum road above the homes in Willow Creek.

The following is a summary of the paced transects completed on October 21st.

1. The first Paced transect was located on a north facing slope in Quaking Aspen Canyon. The GPS Lat and Long for this site is 33 27'29"186 N and 108 36'35"879 W. Slope averaged 30 percent. The site is **Labeled B-4** and was a site that had been evaluated in the monitoring of 2007.

Grasses noted at this site included BROM, FEAR2, MUVI2, KOMA, ERIN and POFE. Notes taken at this site included: High percent of moss cover present acting as effective ground cover. Site appears to be fairly stable with very little soil movement noted. Selective elk use on the POFE and ERIN. Approximately 15 stops on this transect were in a treeless area that did not burn hot during the fire. This site was clipped and weighed and made 1400 pounds per acre.

Percent Ground cover	
Graminoids BA	43
Litter	22
Rock	3
Bare Soil	7
Moss	25
Total	100



This is an overview of B-4



Note moss cover in center of photo, it is acting as effective ground cover.



Note litter on surface from last year's growth.

2. The second Paced transect was located on Gilita Ridge approximately one half mile east from the junction of Forest road 142 and 28. This transect is located in the Negrito Pasture. The site is **Labeled B-2** and was a site that had been evaluated in the monitoring of 2007. GPS coordinates for this site are 33 25'54" 094 N and 108 35'13"377 W. This site has a gentle slope of approximately 4 percent. Grasses seen at this site included BROM, FEAR2, KOMA, ERIN, POFE, ELELE5 and MUVI2. Notes taken at this site included: Transect area has good species diversity. High forb component with some thistle noted throughout area. Percent bare soil is very low due to moss cover. Very little evidence of soil movement noted. Estimated forage production was 800 pounds per acre.

Percent Ground cover	
Graminoids BA	24
Litter	25
Rock	8
Bare Soil	0
Moss	43
Total	100



Overview of B-2 site



Good litter layer in top photo, high percent of moss cover between rocks.

3. The third Paced transect is located approximately 1 mile south east of Snow Canyon tank on a north facing slope in Snow Canyon. This transect is also located in the Negrito Pasture. The site is **Labeled B-3** and was a site that had been evaluated in the monitoring of 2007. GPS coordinates for this site are 33 25'54"077 N and 108 31'08"917 W. This site has a slope of approximately 30 percent. Grasses seen at this site included BROM, FEAR2, KOMA, POFE, ELELE5 and MUMO. Notes taken at this site included: Some rills and evidence of sheet erosion noted along transect. Parent material is from Gila Conglomerate and the moss cover is not as high as on the previous transects which were on basalt parent material. Some of the bare soil is due to gopher activity. Production was estimated at 600 pounds per acre.

Percent Ground cover	
Graminoids BA	25
Litter	50
Rock	5
Bare Soil	5
Moss	15
Total	100



Overview of B-3

4. The fourth Paced transect is located approximately 1 mile south west of Burnt Cabin Tank. This transect is also located in the Negrito Pasture. The site is **Labeled B-10** and was a new site

that had not been evaluated in the monitoring of 2007. GPS coordinates for this site are 33 26'59"900 N and 108 35'43"922 W. This site is gently sloping with a approximate slope of 3 percent. Grasses seen at this site included BROM, FEAR2, KOMA, CAREX, BLTR, MUVI2 and MUMO. This site was clipped and weighed and production was 700 pounds per acre. Notes taken at this site included: Very little evidence of soil movement. Moss cover was providing very effective ground cover. Good species diversity and vigor. Very high percent of annual Muhly in interspacing between perennial grasses.

Percent Ground cover	
Graminoids BA	22
Litter	10
Rock	23
Bare Soil	2
Moss	43
Total	100



Overview of B-10



Note high percent of moss cover

5. The fifth Paced transect is located off of Forest road 153 on a north facing slope in the head of Turkey Creek. This transect is also located in the Negrito Pasture. The site is **Labeled B-11** and was a new site that had not been evaluated in the monitoring of 2007. GPS coordinates for this site are 33 25'25"535 N and 108 38'46"601W. This site is located on a slope of approximately 30 percent. Grasses seen at this site included BROM, FEAR2, KOMA, POFE, ELELE5, BLTR, MUVI2 and MUMO. Notes taken at this site included: Selective elk use of KOMA and POFE noted. High percent of moss noted with a high percent of gravel sized basalt rock under the moss. Soil movement on the slope appeared low. No aspen regeneration noted on slope.

Percent Ground cover	
Graminoids BA	14
Litter	7
Rock	12
Bare Soil	7
Moss	60
Total	100



Overview of B-11



This site had 60 percent moss cover on it.

6. The sixth Paced transect is located off of State Highway 159 on a ridge above the private property and homes in Willow Creek. The site is **Labeled B-6** and had been evaluated in the monitoring of 2007. GPS coordinates for this site are 33 37'19" 377 N and 108 37'15"1531W. This site is located on a ridge top and has a slope range of 0 to 15 percent. Grasses seen at this site included BROM, FEAR2, POFE, MUVI2. Notes taken at this site included: Elk use noted on POFE and BROM. Canopy cover of grasses averaged 40%. Good take of Arizona fescue. Slight amount of soil movement noted.

Percent Ground cover	
Graminoids BA	35
Litter	7
Rock	25
Bare Soil	7
Moss	15
Total	100



Overview of B-6



This site had a good take of Arizona fescue