

Appendix J

Charleston, Gopher, and Sugarloaf Fires (2006) Rehabilitation Summaries

In 2006, the Charleston, Gopher, and Sugarloaf Fires burned portions of the Devils Gate Allotment. The Charleston Fire burned the upper and middle parts of the Cottonwood drainage in the northwest corner of the Indian Creek Pasture. The Sugarloaf Fire burned some of the hills and valleys adjacent to the North Fork of the Humboldt River now inside the Devils Gate Riparian Pasture, whereas the Gopher Fire burned most of the Devils Gate Field on the southern end of the allotment (see Map 2 in Appendix A). A temporary fence was constructed to enclose the burned portion in the Cottonwood drainage and a couple of the drainages were seeded. About the same time, a fence was constructed to create the Devils Gate Riparian Pasture with parts of the Sugarloaf Fire areas within it also reseeded.

The canyons/drainages seeded after the Charleston and Sugarloaf Fires included desirable perennial grasses and big sagebrush. The seeded grasses included Sherman big bluegrass, Great Basin wildrye, thickspike wheatgrass, and bluebunch wheatgrass. Western yarrow, a desirable perennial forb, was also included in the seed mix, along with big sagebrush seed. In the Devils Gate Field, part of the area was aerially seeded with western yarrow, small burnet, and Wyoming big sagebrush.

Rehabilitation objectives were established to measure the success of the various rehabilitation treatments, including temporary rest from livestock grazing, and determine when the burn areas could be reopened to livestock grazing.

The rehabilitation objectives called for a minimum of three mature (3) perennial bunchgrasses per square meter rooted firmly in the soil, and a qualitative assessment of soil and site stability, and hydrologic function, that results in ratings of none to slight departure from that expected from the same kind of ecological site considered to be in stable condition. The size of the mature bunchgrasses were to be equivalent to medium sized perennial grasses such as bluebunch wheatgrass, Thurber needlegrass, Indian ricegrass, squirreltail, and Idaho fescue sometimes referred to as tall stature grasses.

In the fall of 2008 and 2009, data were collected along with other observations to determine if the rehabilitation objectives had been met. The results are as follows:

Charleston Fire (Indian Creek Pasture/Cottonwood Area)

The 2009 report regarding progress towards attainment of the rehabilitation objectives stated the objective of having a minimum density of three mature perennial bunchgrasses had been met. This conclusion was based on ocular observations of plant densities in the burn area which were considered to be similar to the density results found at monitoring site GOWL-02 (see below) for the Gopher Fire. Ratings of soil stability and hydrologic function were not completed.

Sugarloaf Fire (Now within the Devils Gate Riparian Pasture)

The monitoring site for this treatment area was labeled SLWW-01. See location on Map 1 in Appendix A. The plant density data is provided in the table below.

Table J1: 2006 Sugarloaf Fire Rehabilitation Summary - Plant Densities/Square Meter (M²) from SLWW-01 Study Site			
Date: 2009			
Vegetation	Seeded/M ²	Native Release/M ²	
SLWW-01			
Grasses			
Sherman big bluegrass	0.56		
Great Basin wildrye	4.58		
Thickspike wheatgrass	1.38		
Bluebunch wheatgrass	0.02		
Douglas sedge		0.14	
Total Grasses	6.54	0.14	
Perennial Forbs			
Western yarrow	0.12		
Povertyweed		0.14	
Annual Forbs			
Groundsmoke		0.42	
Coyote tobacco		0.02	
Pincushion flower		0.14	
Total Annual Forbs		0.72	
Shrubs			
Douglas rabbitbrush		0.1	
Total	6.66	0.86	

Gopher Fire Aerial Seeding (Devils Gate Field/Pasture)

The monitoring site for this treatment area was labeled GOWL-02 (see Map 2 in Appendix A). Photos are in Appendix B. The plant density data is provided in the table below.

Table J2: 2006 Gopher Fire Rehabilitation Summary - Plant Densities/Square Meter (M²) from GOWL-02 Study Site			
Date: 2009			
Vegetation	Seeded/M ²	Native Release/M ²	
GOWL-02			
Grasses			
Squirreltail	N/A	2.2	
Indian ricegrass	N/A	0.1	
Needle and Thread grass	N/A	0.86	
Bluebunch wheatgrass	N/A	0.32	
Sandberg bluegrass	N/A	14.14	
Total Grasses		17.62	
Perennial Forbs			
Hoods phlox	N/A	7.86	
Aster	N/A	0.18	
Milkvetch	N/A	0.34	
Death camas	N/A	0.14	
Pale agoseris	N/A	0.08	

Table J2: 2006 Gopher Fire Rehabilitation Summary - Plant Densities/Square Meter (M²) from GOWL-02 Study Site		
Date: 2009		
Vegetation	Seeded/M ²	Native Release/M ²
Rydberg penstemon	N/A	0.12
Wild onion	N/A	0.08
Longleaf phlox	N/A	0.02
Carrotleaf lomatium	N/A	0.02
Total Perennial Forbs		8.84
Annual Forbs		
Cryptantha	N/A	0.1
Stickseed	N/A	0.02
Groundsmoke	N/A	0.1
Great Basin woollystar	N/A	0.32
Total Annual Forbs		0.54
Shrubs		
Douglas rabbitbrush	N/A	0.38
Total	0.0¹	27.38

¹ The species of plants aerially seeded (Western yarrow, small burnet, and Wyoming big sagebrush) were not observed growing at the monitoring site.

The combined densities of the medium sized perennial bunchgrasses (squirreltail, Indian ricegrass, needle and thread, and bluebunch wheatgrass) were 3.48/square meter which met the rehabilitation objective for grass density and, with the addition of the densities of Sandberg bluegrass, perennial forbs, and shrubs, the total plant density exceeded the minimum established for rehabilitation.

Table J3: GOWL-02 Point Cover Summary from Density Frame		
Date: May 19, 2009		
Point Cover Type	Total Hits	Percent Cover
Vegetation (Basal)	9	4.7%
Vegetation (Canopy)	39	20.2%
Litter	49	25.4%
Bare Ground	87	45.1%
Rock	9	4.6%
Cryptogamic Crust	0	0.0%
Total	193	100%