

**Appendix I**  
**Devils Gate Allotment - Stag Fire (2001) Rehabilitation Summaries**

Following the 2001 Stag Fire which burned part of the upper Indian Creek drainage and part of the upper eastern edge of the Devils Gate Allotment (see Map 2 in Appendix A), rehabilitation objectives were established to measure the success of the various rehabilitation treatments. Rehabilitation treatments included two aerial broadcast seedings, and temporary rest from livestock grazing to let the seeded and unseeded uplands recover.

**Aerial Seedings**

One of the aerial seeding monitoring sites was labeled DGWA Aerial Watershed Protection Seeding, and the second aerial seeding monitoring site was labeled DGWR Aerial Wildlife Range Seeding (see Map 2 in Appendix A). Photos of each site from 2004 are in the Appendix B. The DGWA area received a variety of perennial grass seeds along with seed from Wyoming big sagebrush. The DGWR area received bluebunch wheatgrass and Idaho fescue seed along with Wyoming big sagebrush seed.

The rehabilitation objectives for the seeded areas called for the establishment of an average of three (3) seeded perennial grasses/square meter (M<sup>2</sup>) with credit also given for the regrowth of native perennial plants (native release) that survived the fire. In 2002, monitoring sites were established in both of these treatment areas and data collected again in 2003 and 2004. The 2004 data for the two study sites are summarized below, with additional details on individual species provided after the table.

| <b>Table 11: 2001 Stag Fire Rehabilitation Summary – Perennial Grass Densities/Square Meter for DGWA and DGWR Study Sites</b> |                          |                               |                           |
|---|--------------------------|-------------------------------|---------------------------|
| Date: 2004  |                          |                               |                           |
| Study Site and Year   | Seeded/M <sup>2</sup>    | Native Release/M <sup>2</sup> | Total/M <sup>2</sup>      |
| <b>DGWA</b>   |                          |                               |                           |
| 2004  | 11.78 (8.3) <sup>1</sup> | 29.8 (10.4) <sup>1</sup>      | 41.58 (18.7) <sup>1</sup> |
|   |                          |                               |                           |
| <b>DGWR</b>   |                          |                               |                           |
| 2004  | 4.5                      | 4.62                          | 9.12                      |
|   |                          |                               |                           |

<sup>1</sup> The numbers in parentheses are grass densities adjusted to be equivalent to medium sized perennial bunchgrasses. For example, a density of 5 thickspike wheatgrass plants (medium height but small basal area), or a density of 3 Sandberg bluegrass (short height and somewhat small basal area) were judged to be equivalent to 1 medium sized bunchgrass.

The densities of seeded and native release plants in 2004, the last year that data were collected, are as follows:

**DGWA Aerial Watershed Protection Seeding –**

Seeded species per square meter: Thickspike wheatgrass-2.00, Streambank wheatgrass-2.88, Basin wildrye-1.56, Canby bluegrass-0.38, Wyoming big sagebrush-0.12, and undistinguishable wheatgrass-4.96.

Native release species per square meter: Sandberg bluegrass-0.70, bluebunch wheatgrass-0.66, juncus (rushes)-3.14, carex (sedges)-25.30, and yarrow-0.06. There were also numerous forbs and shrubs present. The 2004 data indicated the rehabilitation objective had been achieved.

**DGWR Aerial Wildlife Range Seeding –**

Seeded species per square meter: Bluebunch wheatgrass-2.00, Idaho fescue-2.50, and Wyoming big sagebrush-0.12.

Native release species per square meter: Sandberg bluegrass-0.50, Needlegrasses-2.60, Intermediate wheatgrass-1.30, and Basin wildrye-0.22. There were also numerous forbs present. The 2004 data indicated the rehabilitation objective had been achieved.

**Unseeded Uplands (Native Release)**

In addition to the rehabilitation objectives for the seeded areas, there was also a rehabilitation objective established for the recovery of native upland areas that were not seeded.

The objective for unseeded native uplands was that perennial herbaceous production of the burned area be equal to or greater than the perennial herbaceous production of the same/similar ecological site nearby that was not burned. In 2003, data were collected in an area labeled SDGP (see Map 2 in Appendix A) to collect data on herbaceous production. Monitoring results showed the burned area had 1,405.27 lbs/acre of perennial herbaceous production with the adjacent unburned site having 1,407.55 lbs/acre.

**Aspen**

Although no rehabilitation objectives were established for aspen burned in the Devils Gate Allotment, two monitoring sites were established, DGA-1 and DGA-2. Data were collected on aspen heights (Ht.) in 2002 and 2004 as follows:

| Site No. | 2002 Avg. Ht. | 2004 Avg. Ht. |
|----------|---------------|---------------|
| DGA-1    | 2.8 Ft.       | 5.09 Ft.      |
| DGA-2    | 2.8 Ft.       | 5.89 Ft.      |