



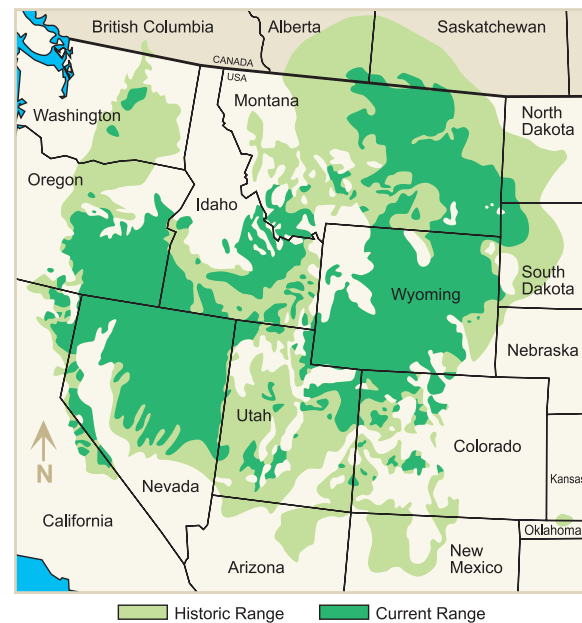
Reduced Sage-grouse Populations

Sage-grouse originally inhabited 13 states and three Canadian provinces.

The species was first described for science by Lewis and Clark during their 1804 expedition. Sage-grouse are currently found in parts of 11 states and southern Alberta and Saskatchewan. Sage-grouse strongholds remain in Montana, Wyoming, Idaho, Nevada, and Oregon. Even in these states, changing land uses have raised concerns over the species' future.

Conversion to urban development and the resulting fragmentation of millions of acres of sage-grouse habitat have contributed greatly to the decline of the species. Land management practices that have altered plant species composition, structure, or production have been detrimental over time. Oil and gas development, especially near leks (strutting areas) during the critical time of breeding, can cause additional pressure. Sage-grouse are also prone to injury and death from collisions with fences, power poles/lines, and vehicles.

Sage-grouse Range, 2000



Map courtesy: Dr. M. Schroeder, Washington Department of Wildlife.

Issues Posing Risk to Sage-grouse

Wildlife agencies have identified 12 major issues in sage-grouse conservation. Four of the issues can be addressed through proper rangeland management and revegetation of critical habitats.

Vegetation. Historical uses of rangelands have altered the density, structure, and composition of big sagebrush and related understory plant communities. In some cases, this has reduced seasonal habitat for sage-grouse.

Grazing. The effects of livestock on sage-grouse habitat, and on the birds themselves, may be positive, negative, or neutral depending on the specific grazing prescription and the site.

Noxious Weeds. Noxious weeds and other invasive weed species have spread across all western states at an unprecedented rate. Invasive plants such as cheatgrass, medusahead and juniper displace desirable native plant species and degrade rangeland health. In many cases the displaced species are critical to sage-grouse survival.

Mining and Energy Development. Much of the nation's oil and gas resources are found under sage-grouse habitats across the western United States. Careless development and production activities can fragment and degrade sage-grouse habitat.

Loss of sagebrush-grasslands in some western states has approached 50 percent. This type of habitat is important to sage-grouse throughout their life cycle. Sage-grouse chicks and juveniles require habitat with a diverse succulent plant community offering nutritious grazing and a supply of insects. Adult sage-grouse rely heavily on Wyoming and mountain big sagebrush for food in winter, and expand their diets to include various forbs and insects in spring and summer.



For More Information

For additional information on NRCS conservation programs that can help improve sage-grouse habitat, contact your local conservation district and the Natural Resources Conservation Service. The office nearest you can be located on the web at: <http://www.nrcs.usda.gov>.

Other sources of information on sage-grouse include the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, and state fish and game departments.



Sage-grouse rely heavily on mountain and Wyoming big sagebrush for food and cover.



Helping People Help the Land

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United States Department of Agriculture
Natural Resources Conservation Service

Improving Sage-grouse Habitat through Revegetation and Rangeland Management



Photo: US Fish and Wildlife Service.

Revegetation and Management Options for Improving Sage-grouse Habitat

Sage-grouse habitat can be established by reclaiming disturbed lands with diverse plant communities that include native forbs, grasses, and shrubs. See the following tables for native species and cultivars/germplasms available for revegetation within the Intermountain West, the Great Basin, and the Northern Great Plains plant adaptation zones.

Introduced plants that also have potential value for sage-grouse habitat improvement include alfalfa varieties, 'Appar' blue flax, and 'Delar' small burnet. Other important forbs during spring and summer nesting and brood-rearing include common dandelion, salsify, and prickly lettuce.

Studies have found that sage-grouse populations and habitats are very compatible with livestock and grazing management. Practices, such as rotational grazing systems and exclusion or deferrment in riparian areas, can enhance plant community vigor, suppress noxious weeds, and sustain diverse plant communities with forb components that benefit sage-grouse.

Many NRCS conservation programs, including the Conservation Stewardship Program (CSP), the Wildlife Habitat Incentives Program (WHIP), and the Environmental Quality Incentives Program (EQIP), can help improve sage-grouse habitat.

Commercially Available Native Forb Species

| Species | Region ¹ | Cultivar Germplasm | Pure Stand PLS Lbs/ Acre ² |
|---------------------------------|---------------------|------------------------------|---------------------------------------|
| Slender white prairie clover | IMW | Antelope | 3 |
| Purple prairie clover | IMW | Bismarck, Kaneb | 3 |
| Prairie coneflower | IMW | Stillwater | 1.2 |
| Narrow-leaved purple coneflower | NGP | Bismarck | 1 |
| Lewis flax | GB, IMW, NGP | Maple Grove | 4 |
| Western yarrow | GB, IMW, NGP | Eagle, Great Northern | 0.5 |
| Rocky mountain penstemon | IMW, NGP | Bandera | 1.5 |
| Fuzzytongue penstemon | IMW, NGP | Old Works | 4 |
| Firecracker penstemon | GB | Richfield | 4 |
| Globemallow | GB, IMW, NGP | Common | 2 |
| Northern sweetvetch | IMW | Timp | 18 |
| Maximilian sunflower | NGP | Medicine Creek, Prairie Gold | 0.1 |
| Stiff sunflower | NGP | Bismarck | 0.1 |
| Arrowleaf balsamroot | GB, IMW | Common | 0.1 |
| Sego lily | GB, IMW | Common | 0.1 |
| Bluebells | GB, IMW | Common | 0.1 |
| Astragalus sp. | GB, IMW, NGP | Common | 0.1 |
| Hawksbeard | GB, IMW | Common | 0.1 |
| False dandelion | GB, IMW | Common | 0.1 |
| Sulphur flower buckwheat | GB, IMW, NGP | Common | 0.1 |
| Desert-parsley | GB, IMW, NGP | Common | 0.1 |

¹ GB = Great Plains; IMW = Intermountain West; NGP = Northern Great Plains.

² PLS = Pure Live Seed. Grasses, forbs and shrubs will rarely be planted in a monoculture. Percentages of pure stand seeding rates will be used in species combinations developed to mimic a diverse native plant community.

Commercially Available Native Grass Species

| Species | Region ¹ | Cultivar Germplasm | Pure Stand PLS Lbs/ Acre ² |
|--------------------------|---------------------|--|---------------------------------------|
| Bluebunch wheatgrass | GB, IMW, NGP | Anatone, Whitmar, Goldar, P-7 | 7 |
| Snake River wheatgrass | GB | Secar, Discovery | 7 |
| Bottlebrush squirreltail | GB | Sand Hollow, Fish Creek, Toe Jam Creek | 7 |
| Thickspike wheatgrass | GB, IMW, NGP | Critana, Bannock, Sodar | 6 |
| Indian ricegrass | GB, IMW, NGP | Nezpar, Rimrock, Ribstone | 6 |
| Big bluegrass | GB, IMW, NGP | Sherman | 2 |
| Sandberg bluegrass | GB, IMW, NGP | High Plains, Opportunity | 2 |
| Basin wildrye | GB, IMW, NGP | Trailhead, Magnar, Columbia | 7 |
| Western wheatgrass | GB, NGP | Recovery, Rosana | 6 |
| Galleta grass | GB | Viva | 4 |
| Slender wheatgrass | GB, IMW, NGP | Pryor, First Strike | 7 |
| Mountain bromegrass | IMW | Bromar, Garnet | 10 |
| Idaho fescue | IMW | Joseph, Nezperce, Winchester | 4 |
| Little bluestem | NGP | Badlands | 4 |
| Side-oats grama | NGP | Pierre | 4.5 |
| Blue grama | NGP | Bad River | 2 |

Commercially Available Native Shrub Species

| Species | Region ¹ | Cultivar Germplasm | Pure Stand PLS Lbs/ Acre ² |
|------------------------|---------------------|----------------------------------|---------------------------------------|
| Mountain big sagebrush | GB, IMW, NGP | Common | less than 1 |
| Wyoming big sagebrush | GB, IMW, NGP | Common | less than 1 |
| Winterfat | GB, IMW, NGP | Open Range, Northern Cold Desert | 8 |
| Western snowberry | IMW | Trapper | 17.5 |
| Common snowberry | IMW, NGP | Prospectors | 17.5 |
| Fourwing saltbush | GB, NGP | Snake River Plains, Wytana | 1 |



Stillwater germplasm prairie coneflower.



Great Northern germplasm western yarrow.



Antelope germplasm slender white prairie clover.