

Conserving the Greater Sage Grouse

A Compilation of Efforts Underway
on State, Tribal, Provincial, and Private Lands



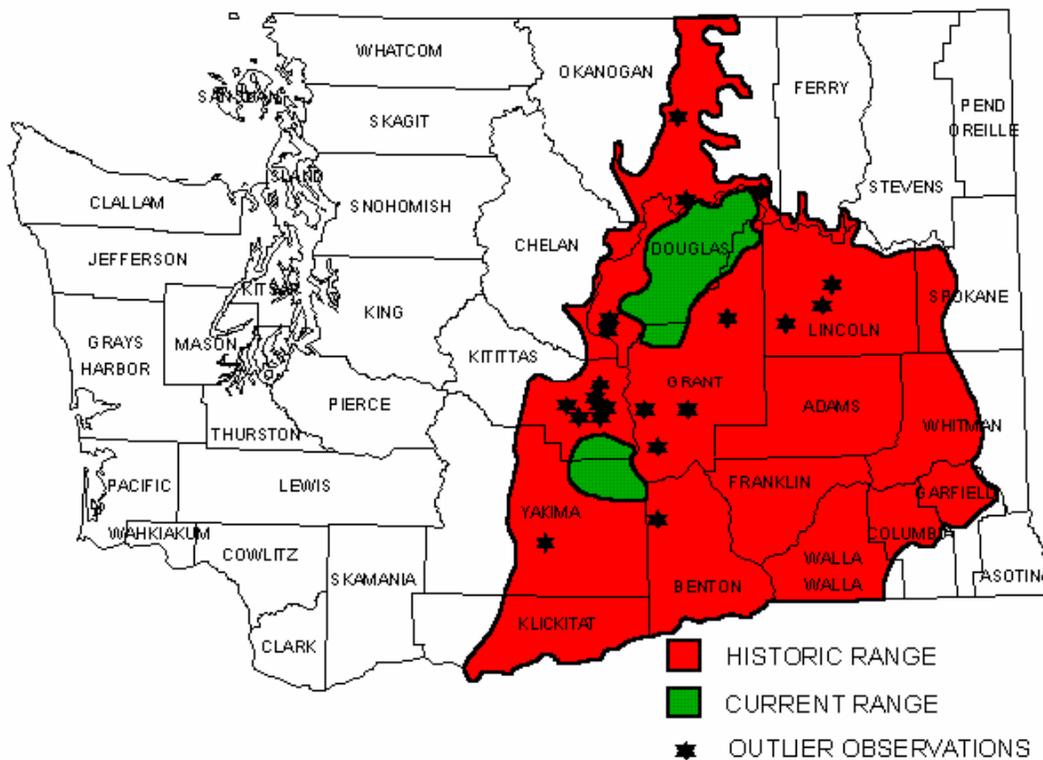
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DEVELOPMENT OF MANAGEMENT AND RECOVERY PLANS

Status

About 200 years ago the greater sage-grouse was one of the most abundant species observed by Lewis and Clark in the region that ultimately became the state of Washington. In 1998 the Washington Department of Fish and Wildlife completed a status review of the greater sage-grouse in Washington which is currently available at the following website: <http://wdfw.wa.gov/wlm/diversity/soc/status/fnlsage.pdf>. This status report was subsequently followed by a publication in *Northwestern Naturalist* in 2000 titled “Changes in the Distribution and Abundance of Sage Grouse in Washington”: http://wdfw.wa.gov/wlm/research/papers/sage_grouse/sage_grouse.pdf. The following map was produced illustrating some of the long-term changes in the distribution of sage-grouse in the state:



As a result of some of the long-term changes in the distribution and abundance of greater sage-grouse in the state of Washington, the species was subsequently listed as a state ‘threatened’ species in 1998. In 2001 the Washington population of greater sage-grouse also became a ‘Candidate’ under the federal Endangered Species Act when the U. S. Fish and Wildlife Service found that listing as Threatened was ‘warranted but precluded’ by higher priority listing activities.

General Management Activities

In 1995 the Washington Department of Fish and Wildlife produced a state-wide management plan for the greater sage-grouse. The plan focused on the development of partnerships, designation of management zones, and the formulation of population and distribution goals. This plan was subsequently followed in 2004 with the 'Greater Sage-Grouse Recovery Plan'. The recovery plan is available at the department's web site: http://wdfw.wa.gov/wlm/diversty/soc/recovery/sage_grouse/index.htm. The executive summary for the recovery plan follows:

The sage-grouse was listed as a threatened species by the state of Washington in 1998. In May 2001, the Washington population of the sage-grouse also became a Candidate for listing under the federal Endangered Species Act when the U.S. Fish and Wildlife Service (USFWS) found that listing as Threatened was warranted but precluded by higher priority listing activities. This Recovery Plan summarizes the state of knowledge of sage-grouse in Washington and outlines strategies to increase their population size and distribution in order to ensure the existence of a viable population of the species in the state.

The sage-grouse has been declining in Washington and many parts of its range in North America. The reduction in sage-grouse numbers and distribution in Washington is primarily attributed to loss of habitat through conversion to cropland and degradation of habitat by historic overgrazing and the invasion by cheatgrass and noxious weeds. Sage-grouse occur on about 8% of their historical range in the state. The population is estimated to have declined 62% from 1970 to 2003. Local extirpations have been noted as recently as the 1980's. The statewide breeding population of sage-grouse in Washington in 2003 was estimated to be 1,011 birds. This estimate is based on leks counts of males, and probably is an underestimate.

A breeding population of about 624 sage-grouse is located in Douglas and Grant Counties where a large amount of agricultural lands are enrolled in the Conservation Reserve Program (CRP) and shrub-steppe remnants exist where rocky soil and rugged terrain have precluded agricultural conversion. The other population of about 387 birds is located in Kittitas and Yakima counties in contiguous shrub-steppe that has been maintained on the Yakima Training Center (YTC), a U.S. Army training facility. Neither of the 2 isolated grouse populations is large enough for long-term viability. A recent investigation indicated reduced genetic diversity in both the YTC and Douglas-Grant populations. The polygamous mating system and fluctuations of sage-grouse populations over time reduce the effective population size and increase the number of grouse needed for a population to be viable.

Major threats to the Washington populations include fires and continued conversion of shrub-steppe to cropland or development; additional factors

affecting sage-grouse include the impacts of military training and past and ongoing grazing practices. The Douglas-Grant County population is dependent on voluntary enrollment of private lands in CRP, a program that may not always be funded by Congress. Maintenance of the YTC population requires frequent rehabilitation of damage to vegetation caused by military training. Wind energy developments may pose a threat to recovery if sage-grouse avoid nesting and brood rearing within 1 mile of wind turbines, as has been predicted for prairie-chickens. One wind energy project that was recently denied a permit by Benton County, might have effectively eliminated 43 mi² of recovery area from use by breeding sage-grouse; a second proposal may affect suitability of habitat in an important corridor between the 2 existing populations. Remaining habitat has been degraded by fragmentation, historic overgrazing, fires, and the invasion by cheatgrass, medusahead, and other exotic weeds. Disease is a potential new threat to the population. In August 2003, West Nile Virus killed sage-grouse in Wyoming, Montana, and Alberta. The implications of the added source of mortality for more robust populations are not yet known, but the disease may pose a serious threat to Washington's small populations.

The small size and continued threats to the 2 populations suggest that the long-term persistence of sagegrouse in Washington will depend on protecting and enhancing suitable shrub-steppe habitat, re-establishing additional populations, and expanding existing populations outside the current occupied areas. The minimum viable population for sage-grouse in Washington is estimated at 3,200 birds. The recovery objective to down-list the sage-grouse from Threatened to Sensitive status is an average breeding season population of at least 3,200 birds for a period of 10 years, with active lek complexes in 6 or more Sage-grouse Management Units. The recovery plan outlines strategies to increase population numbers and distribution. A study is underway to evaluate the feasibility of re-establishing a sage-grouse population on the Yakama Reservation through reintroductions. A project to translocate additional birds into the YTC population to reduce genetic deterioration is also underway; 25 sage-grouse hens were trapped in Nevada and transported to Washington and released on the YTC in March 2004.

Sage-grouse recovery will require protecting remaining shrub-steppe habitat from fires, harmful grazing, conversion, and development. Some areas of degraded shrub-steppe will need to be restored in order to support nesting sage-grouse. The structure of older CRP fields increasingly resembles shrub-steppe and provides important habitat, but CRP does not guarantee long-term protection. New programs in the 2002 Farm Bill may benefit sage-grouse by providing funding for habitat improvements, protection, and the acquisition of perpetual conservation easements. Washington Department of Fish and Wildlife (WDFW), the Bureau of Land Management (BLM), and The Nature Conservancy have recently acquired lands where shrub-steppe will be protected or restored,

but restoration may take a long period of time. The success of sage-grouse recovery, however, may depend on cooperative efforts by private landowners, tribes, and agencies that manage public lands in recovery areas or influence agricultural practices on private lands. These agencies include the U.S. Army, WDFW, BLM, USFWS, U.S. Department of Energy, Washington Department of Natural Resources, Washington State Parks, and USDA Natural Resources Conservation Service. A multi-party 5-year action plan for sage-grouse that will outline more specific actions and responsibilities may be completed by the Washington Sage-grouse Working Group in 2004.

Maintaining sage-grouse in Washington will depend on protecting remaining habitat, restoring degraded habitat and re-establishing populations outside their current range. Sage-grouse recovery in Washington will take a sustained cooperative effort by many agencies and individuals for a long period of time. Successful recovery of sage-grouse will result in benefits to many other shrub-steppe species that have also declined dramatically in the state.

The Washington Department of Fish and Wildlife also completed management recommendations for greater sage-grouse that are available online at the following web site: http://wdfw.wa.gov/hab/phs/vol4/sage_grouse.pdf The guidelines are part of a regular series dealing with priority habitats and species. The guidelines itemize many of the basic activities landowners can focus on to improve conditions for greater sage-grouse. These are listed below:

- Conversion of shrub-steppe habitat is strongly discouraged.
- Removal or alteration of sagebrush is discouraged within sage-grouse management areas, particularly near leks and in nesting and wintering areas. Sagebrush should not be removed within 300 m (984 ft) of sage-grouse foraging areas along riparian areas, meadows, lake beds, and farmlands.
- Sagebrush removal should not occur where live sagebrush cover is <25% in nesting areas, and <30% in wintering areas, on slopes 20% and/or on slopes with shallow soils where big sagebrush is <30 cm (12 in) in height.
- Protect sagebrush from uncontrolled fires. If necessary, burn in late April to early May in strips <45 m (148 ft) wide and <90 m (295 ft) long. Avoid using fire where increase of or invasion by cheatgrass is likely.
- Develop grazing management plans based on the vegetation characteristics of sage-grouse breeding, brood-rearing, and winter habitats.
- Grazing in sage-grouse breeding, brood-rearing, and winter habitats should be light enough to promote long-term sustainability of habitat and stocking rates should be reduced during drought.

- Dramatically reduce or cease all grazing for a long time period when site is degraded by over-grazing to allow recovery of the native plant community. The cessation of grazing alone will likely not restore sites that have been completely overtaken by annual species.
- Insecticides should not be applied to sage-grouse summer habitat. Organophosphorus and carbamate insecticides are especially toxic.
- Use integrated pest management techniques within sage-grouse management areas.
- Minimize human disturbances from mid-February through early June within breeding and nesting areas. Restrict activity on roads traversing sage-grouse leks during hours when birds are active during lek season.
- Avoid building powerlines, wind turbines and other tall structures within 3 km (1.9 mi) of grouse habitat or within 8 km (5 miles) of leks. Fences should be constructed or modified in a manner that will reduce associated mortality.
- Support agricultural set-aside programs (such as the Conservation Reserve Program and the Wetlands Reserve Program) in sage-grouse management areas. Set-aside conservation programs should be structured to encourage enrollees to plant a diverse range of perennial shrubs, grasses, and forbs and to retain annual residual cover.

Many agencies, non-governmental organizations, and individuals have offered to help in the recovery and planning efforts for greater sage-grouse. These efforts include a Habitat Conservation Plan that is being developed under the leadership of the Foster Creek Conservation District in Douglas County, Washington. The Habitat Conservation Plan is being designed to include multiple landowners and multiple species, including the sage-grouse. The ultimate goal of the plan is to improve conditions for the covered species while providing some regulatory certainty for the participating landowners. The target completion date for the Habitat Conservation Plan is 2005. A second conservation effort is a Yakima-Kittitas Greater Sage-Grouse Working Group. The primary focus of this working group has been on the management of sage-grouse on the Yakima Training Center, but also includes regional considerations for the surrounding areas. This effort is currently in the process of being expanded into a statewide Greater Sage-Grouse Working Group. This statewide working group will monitor the progress on the recovery plan as well as deal with specific issues of management concern. A partial list of the participants in these efforts follows:

Washington Department of Fish and Wildlife
 Bureau of Land Management
 Private landowners
 The Nature Conservancy
 Foster Creek Conservation District
 Bonneville Power Administration
 Yakima Training Center

Yakama Nation
Colville Confederated Tribes
Washington Department of Natural Resources
Washington Rangeland Committee
National Resource Conservation Service
Farm Services Agency
Audubon Society
U. S. Fish and Wildlife Service

Specific Management Activities

Genetic research – The Washington Department of Fish and Wildlife, along with the other western states and provinces, participated in a range-wide genetic survey of sage-grouse that was conducted through of the University of Denver in Colorado. This research has helped to illustrate areas of genetic interchange as well as areas of genetic isolation. The results will likely form a foundation for much of the future population management efforts, particularly with regard to translocations.

Translocations – With the cooperation of the Nevada Division of Wildlife, 25 female greater sage-grouse were translocated from Nevada to the Yakima Training Center in Yakima County, Washington in spring 2004. Genetic data indicated that the two Washington populations, and the Yakima Training Center population, in particular, have undergone a genetic bottleneck, and an infusion of birds from a different population would help restore normal genetic diversity. The translocated birds are currently being monitored and additional birds may be introduced next year if necessary.

Habitat assessment on the Yakama Reservation – Habitat mapping and a feasibility assessment has been conducted on the Yakama Reservation. Although the final report has not been released, the effort illustrates an intense interest on the part of the tribes to re-establish populations of native birds.

Habitat restoration – Several shrub-steppe restoration projects are underway or planned in Washington. A partial list includes the Hanford Reach National Monument, Yakima Training Center, Swainson Lake Wildlife Area, Chester Butte Wildlife Area, Sagebrush Flat Wildlife Area, West Foster Creek Wildlife Area, and Colville Indian Reservation. The restoration activities include modifications in livestock management, reestablishment of native vegetation, and post-fire rehabilitation. Participants in these restoration activities include The Nature Conservancy, Washington Department of Fish and Wildlife, U. S. Fish and Wildlife Service, Bureau of Land Management, Colville Confederated Tribes, Yakama Nation, and Yakima Training Center.

Range-wide conservation assessment – Mike Schroeder of the Washington Department of Fish and Wildlife was one of the four principal authors on the recently completed “Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats”. The assessment required unprecedented cooperation among the western states and provinces and included more than 20 additional contributors. The assessment is available online at: <http://sagemap.wr.usgs.gov/>

Research on greater sage-grouse – Research on greater sage-grouse is ongoing in Washington. Translocated birds on the Yakima Training Center are being monitored so that the ultimate impact of the translocation can be assessed. Analysis on previously collected data on movement and habitat use is also underway.

Research on shrub-steppe habitat – Research on shrub-steppe habitat is currently focusing on bird, mammal, and reptile responses to restoration activities. This research includes substantial effort on the Conservation Reserve Program habitats, which include approximately 1,000,000 acres in formerly shrub-steppe dominated areas of eastern Washington. A positive response by greater sage-grouse to the Conservation Reserve Program has already been documented in Washington.

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