

Fact Sheet
Endangered Species Act Listing Decision for the Greater Sage-Grouse

March 5, 2010:

After thoroughly analyzing the best scientific and commercial information available, the Fish and Wildlife Service has concluded that the greater sage-grouse warrants protection under the Endangered Species Act. However, the Service has determined that proposing the species for protection is precluded by the need to take action on other species facing more immediate and severe extinction threats.

As a result, the sage-grouse will be added to the list of species that are candidates for Endangered Species Act protection. The Service will review the status of the sage-grouse annually, as we do all candidate species, to determine whether it warrants more immediate attention.

The Service analyzed potential factors that may affect the habitat or range of the greater sage-grouse and determined that habitat loss and fragmentation resulting from wildfire, energy development, urbanization, agricultural conversion, and infrastructure development are the primary threats to the species.

The negative effects of fragmentation on greater sage-grouse are diverse and include reduced courtship site persistence, courtship site attendance, winter habitat use, recruitment, yearling annual survival, and female nest site choice.

Greater sage-grouse populations have been declining since the 1960s. Population projections and our analysis of threats suggest the declining population trend will continue across the species' range, and extirpation is anticipated in areas affected by energy development and increased wildfire frequency within the next 30 to 100 years. The resulting landscape is likely to consist of scattered sage-grouse populations across the species range with minimal, if any, connectivity placing the species in danger of extinction.

Invasive plants are also a serious rangewide threat to greater sage-grouse habitat because they can out-compete sagebrush and are increasing wildfire frequencies, further contributing to direct loss of habitat. Once established, invasive plants reduce and eliminate vegetation essential for greater sage-grouse to use as food and cover. Sagebrush restoration techniques are limited and have generally been ineffective.

Research examining the effects of energy development (primarily oil, gas, and coal-bed methane) indicates that greater sage-grouse populations are negatively affected by energy development activities, especially those that degrade important sagebrush habitat, even when mitigative measures are implemented. Impacts can result from direct habitat loss, fragmentation of important habitats by roads, pipelines and powerlines, and direct human disturbance. The negative effects of energy development often add to the impacts from other human development resulting in declines in greater sage-grouse populations. For example, 12 years of coal-bed methane gas development in the Powder River Basin of Wyoming has coincided with a 79 percent decline in the greater sage-grouse population. Population declines associated with energy development results from abandonment of leks (courtship sites), decreased attendance at

the leks that persist, lower nest initiation, poor nest success and chick survival, decreased yearling survival, and avoidance of energy infrastructure in important wintering habitat.

It is predicted that continued energy exploration and development will increase over the next 20 years. Greater sage-grouse populations are predicted to decline 7 to 19 percent due to the effects of oil and gas development in the eastern part of the range; this decline is in addition to the 45 to 80 percent decline that is estimated to have occurred rangewide.

Over 30 percent of the habitat in greater sage-grouse range has high potential for wind power. The effects of renewable energy development are likely to be similar to those of nonrenewable energy as similar types of infrastructure are required.

The Intergovernmental Panel on Climate Change concludes that global climate change is occurring and has published research that represents the best available science on the subject. Projected climate change and its associated consequences have the potential to affect the greater sage-grouse and increase its risk of extinction as the impacts of climate change interact with other stressors that are already affecting the species.

The long-term impact of climate change to greater sage-grouse is yet to be determined. However, climate change will facilitate the incursion of invasive plants and the associated changes in fire regime which currently pose significant threats to greater sage-grouse and the sagebrush ecosystem.

As there is some degree of uncertainty regarding the potential effects of climate change on greater sage-grouse, climate change in and of itself was not considered a significant factor in our determination whether greater sage-grouse is warranted for listing.

Federal agencies manage the majority of greater sage-grouse habitat in the United States. Overall, the ability of these agencies to adequately address the issues of wildfire and invasive plants across the landscape is limited. However, the Service believes new mechanisms could be adopted to target the protection of greater sage-grouse habitats from fire. Energy development and its associated infrastructure are expected to continue. Protective measures and strategic siting of energy developments away from core sage grouse habitats are needed to reduce this threat into the future.

This finding combined two additional and related actions into one range-wide status review: (1) whether there is a western subspecies of greater sage-grouse; and (2) if the sage-grouse populations in the Bi-State area of California and Nevada qualify as Distinct Population Segments (DPS) and if they warrant listing.

The Service determined that the Bi-State population of greater sage-grouse constitutes a valid Distinct Population Segment (DPS) and thus is a listable entity under the Endangered Species Act (ESA). Further, after evaluating all the best available scientific and commercial information regarding the greater sage-grouse, including an analysis of the threats to sage-grouse and sagebrush habitat in the Bi-State area, the Service has determined that protection under the ESA is warranted. However, listing the Bi-State DPS of the greater sage-grouse at this time is

precluded by the need to take action on other species facing more immediate and severe extinction threats.

As a result, the Bi-State sage-grouse DPS will be placed on the list of species that are candidates for Endangered Species Act Protection

The Service found no morphological, behavior or genetic data to support a delineation of a western or eastern subspecies of the greater sage-grouse. As a result, the designation of the Columbia Basin populations, currently candidates for listing as a distinct population of the western subspecies, is no longer appropriate. The Columbia Basin populations were considered in the rangewide species status review and are included in the determination for the entire species.

The Service based its final determination on the accumulated scientific data provided by State and Federal agencies and Tribes, as well as data and information provided through commercial and public comments. The review of relevant materials included 25 chapters of new information and or analyses contained in the peer-reviewed monograph entitled: *Ecology and Conservation of Greater Sage-Grouse: A Landscape Species and Its Habitats* which was edited by the U.S Geologic Survey for publication by the Cooper Ornithological Society in their Studies in Avian Biology Series. Thirty-eight scientists from federal, state, and nongovernmental organizations collaborated to produce the analyses, synthesis and findings presented in the chapters of this monograph.