

Frequently Asked Questions: Greater Sage-Grouse Status Review

After evaluating the best available scientific and commercial information regarding the greater sage-grouse, the Service has determined that protection for the greater sage-grouse under the Endangered Species Act (ESA) is no longer warranted and is withdrawing the species from the candidate species list.

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I. About the Decision

1. Why did the U.S. Fish and Wildlife Service make a determination regarding the status of the greater sage-grouse?

In 2010, the U.S. Fish and Wildlife Service determined that the greater sage-grouse was warranted for protection under the ESA due to the loss and fragmentation of habitat and a lack of adequate regulatory mechanisms to stem habitat loss. The Service did not propose a listing rule at the time due to the need to address higher priority listing actions. When the Service made the warranted but precluded finding in 2010, the sage-grouse became a candidate species. Through a court-ordered work plan, the Service committed to resolve the greater sage-grouse's "candidate" designation by September 30, 2015 by either proposing to list the species as threatened or endangered or remove the species from the "Candidate List," an action already required by the ESA.

After evaluating the best available scientific and commercial information regarding the greater sage-grouse, the Service has determined that protection for the greater sage-grouse under the Endangered Species Act (ESA) is no longer warranted and is withdrawing the species from the candidate species list.

2. How did the Service arrive at this "not warranted" finding?

In September 2015, federal agencies completed amendments and revisions to 98 separate federal land use plans to address habitat loss, fragmentation, and other threats to the bird and its habitat. This represents the largest landscape-scale conservation planning effort in U.S. history. In addition, states in the greater sage-grouse range developed or updated greater sage-grouse conservation plans.

New federal and state regulatory mechanisms developed since 2010 in the Rocky Mountain region have addressed the most serious threats to the species, primarily fossil fuel and renewable energy development, infrastructure such as roads and power lines, mining, improper grazing, the direct conversion of sagebrush to croplands, and urban and ex-urban development. In the Great

Basin region, regulatory mechanisms and other conservation efforts developed since 2010 will substantially reduce and mitigate the primary potential threats of wildfire, invasive plants, and conifer encroachment.

Since 2010, science-based regulatory mechanisms in federal and state plans have substantially reduced risks to more than 90 percent of the species' modeled breeding habitats across its 173-million-acre range.

In addition, voluntary, multi-partner private-lands efforts, including the Sage Grouse Initiative, a project of the Natural Resources Conservation Service, as well as programs run by the U.S. Fish and Wildlife Service, have protected high-quality greater sage-grouse habitat on millions of acres of private rangeland across the West.

Range-wide, numerous large populations of sage-grouse remain distributed across the landscape and are supported by undisturbed expanses of habitat. The focus of regulation and management in the most important habitat containing the greatest number of sage-grouse will ensure that abundant sage-grouse populations will continue to be distributed across the range into the foreseeable future.

Based on the best available scientific and commercial information, the Service has determined that the primary threats to sage-grouse have been ameliorated by conservation efforts implemented by federal, state, and private land owners. The Service expects that the species will remain well-distributed and interconnected into the foreseeable future due to the implementation of regulatory mechanisms and other conservation efforts that protect sage-grouse and their habitat. Therefore, the Service has determined that listing the sage-grouse in all or a significant portion of its range is not warranted at this time.

3. What has the Service concluded regarding the change between 2010 and 2015?

In the Rocky Mountains, federal land use plans developed since 2010 and state plans like Wyoming's Core Area Strategy have and will substantially reduce the primary potential threats of fossil fuel and renewable energy development, and infrastructure.

In the Great Basin, federal land use plans developed since 2010, combined with Oregon's state plan, NRCS efforts, the comprehensive rangeland fire management strategy, and the success of the Service's CCAA & CCA program will substantially reduce the primary potential threats of wildfire, invasive plants, and conifer encroachment as well as reduce threats from energy and other forms of development.

4. Why did the Service decide the Columbia Basin population is not a Distinct Population Segment?

The Service evaluated multiple factors and found that the population in the Columbia Basin, while geographically separate, is not biologically significant to greater sage-grouse range-wide and is therefore not a Distinct Population Segment.

In the current evaluation, the Service looked at the Columbia Basin population's significance across the 11-state greater sage-grouse range, rather than in just the western portion of the range. The Service found that the sage-grouse populations in the Columbia Basin continue to be separated from other populations by at least 155 miles. However, translocations of sage-grouse from outside of the Columbia Basin, which began in 2004, have provided genetic exchange between the Columbia Basin and other populations.

In reevaluating the significance of the population the Service found that the Columbia Basin did not occur in a unique or unusual ecological setting, as sage-grouse are fairly adaptable to a broad range of sagebrush communities throughout western North America. The Service also found that the loss of the population would not likely result in a significant gap in the range of the species. Finally, while genetic diversity in the Columbia Basin is low, the best available information does not suggest that the population is markedly different from other populations in its genetic makeup.

5. How was the Service's decision impacted by language in the 2014 appropriations law?

On May 10, 2011, the Service filed a multiyear work plan as part of a settlement agreement with Wild Earth Guardians and others in consolidated cases in the U.S. District Court for the District of Columbia. The settlement included a schedule to publish proposed rules or not-warranted findings for 251 species designated as candidates as of 2010. The work plan included a deadline to resolve the greater sage-grouse's "candidate" designation by September 30, 2015 by either proposing to list the species as threatened or endangered or removing the species from the "Candidate List," an action already required by the ESA. The settlement did not commit the Service to any specific determination.

In December 2014, Congress passed the Omnibus Appropriations Bill, which included language precluding the Service from spending appropriated funds on a proposed listing rule for greater sage-grouse or a Columbia Basin distinct population segment. As a result, during this status review, the Service has considered only whether the species still warranted ESA protection. The rider did not impact the Service's ability to decide whether listing was warranted or not, nor affect the ability to develop, implement and analyze conservation efforts to support the species, nor prevent the Service from publishing this finding consistent with the court deadline.

II. About the Sage-grouse: Range and Population

6. What is the range of greater sage-grouse and how does this compare to historical levels?

Prior to the European settlement of western North America in the 19th century, greater sage-grouse occurred in 13 states and three Canadian provinces. Sagebrush habitats with the potential to support greater sage-grouse occurred over approximately 463,509 square miles (296,645,760 acres) before 1800.

Currently, greater sage-grouse are found in 11 states (California, Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming) and two Canadian provinces (Alberta and Saskatchewan), occupying approximately 271,600 square miles (173,000,000 acres), or roughly half of the historical range.

7. What is the population estimate of greater sage-grouse and how does this compare to historical levels?

Sage-grouse are especially difficult to count because of their large range, camouflage coloring and ability to hide in sagebrush. While there is a keen interest in population sizes, there is no effective and universally accepted way to estimate populations. Instead, state fish and wildlife agencies count the most visible population segment of the species: male sage-grouse displaying on communal mating sites, called leks, during mating season. There is no systematic count of females, sub-adults, or non-displaying males.

Agencies use lek count data as an index to calculate population trends to monitor the health and trajectory of populations. Some wildlife agencies collect sage-grouse wings from hunters to help assess population trends.

Greater sage-grouse have a clumped distribution across their range as a result of variations in habitat quality and seasonal requirements. Approximately half of the birds occur in the Rocky Mountain portion of the range and half in the Great Basin portion of the range. Greater sage-grouse populations are cyclic and can fluctuate by 30 or 40 percent during one cycle (as long as 15 years). This increases the challenge that wildlife managers face in establishing population estimates.

There are several reports and publications that describe and report population trends derived from lek count data [Connelly et al. 2004, Western Association of Fish and Wildlife Agencies (WAFWA) 2008, Garton et al. 2011, Garton et al. 2015, and WAFWA 2015]. While each analyzed a slightly different time frame, they all conclude there has been a long-term population decline range-wide, with population estimates from 200,000 to 500,000 birds range-wide.

Despite long-term population declines, greater sage-grouse remain relatively abundant and well-distributed across the species' 173-million acre range.

8. What is the Service's current assessment of the status of greater sage-grouse?

Greater sage-grouse populations are still relatively large and well-distributed across its range. Conservation efforts by federal, State, and private partners have greatly changed the likely trajectory of the species since 2010, although the Service anticipates some greater sage-grouse populations may experience continued declines as these measures take effect.

The Service is confident that the potential habitat impacts of inadequately regulated development identified in 2010 will now be well-managed. The new conservation measures and management direction included in the federal land use plans and in key state management plans generally require avoidance of important habitat, minimization of impacts where avoidance is infeasible and mitigation to a net benefit standard for activities that impair greater sage-grouse habitat.

Voluntary conservation on private lands has also improved the outlook for local populations.

Based on the number of large, connected populations distributed across the species' range, the Service's current assessment of primary threats to the species, and the unprecedented level of conservation actions now in place to address those threats, the Service has concluded that the greater sage-grouse is no longer likely to face the risk of extinction in the foreseeable future.

9. Why do the recent population trend reports authored by Edward O. Garton and the Western Association of Fish and Wildlife Agencies differ?

Two recent population trend analyses, one by a group of researchers led by University of Idaho's Edward O. Garton and the second by WAFWA, used similar data sets based on lek counts conducted by state wildlife agencies. But they came to different conclusions about population estimates, primarily because of the additional two years of data used by WAFWA.

The latest analysis conducted by Garton et al built upon a previous analysis (Garton et al. 2011) that spanned from 1965-2007, but added data from the 2007-2013 period.

Garton et al. (2015) reported a 56 percent decline in the number of breeding males—from 2007 to 2013. Garton acknowledged that it appeared populations were at a cyclical low point in 2013.

WAFWA's population analysis incorporated data from 1965 to present, including the years 2014 and 2015, when populations appeared to enter a cyclical upswing. Their research showed a 63 percent increase in the number of breeding males from 2013 to 80,284 in 2015.

Data indicates that from 2010 to 2015 the range-wide greater sage-grouse population has continued its long-term decline. However, most populations in Wyoming, Utah, Oregon and Colorado, appear to have stabilized or increased as sage-grouse appear to be in a cyclic upswing.

III. About the Conservation Effort and Plans

10. Why does this conservation effort matter?

The greater sage-grouse conservation effort is one of the largest and the most challenging conservation undertakings in U.S. history. Sage-grouse range over an area the size of Texas and inhabit an arid landscape where the seasons swing between blistering heat and bitter cold. It is a species that does not adapt well to sudden environmental change, yet the sagebrush landscape has experienced rapid human development during the last century that has resulted in a variety of threats to sage-grouse in across its range.

The Service's September 30, 2015 deadline on the listing determination galvanized a large and diverse group of partners to work toward a common goal of reducing or eliminating threats to sage-grouse while maintaining current and future economic development potential. The need to

balance the habitat requirements of the bird with human activities has motivated scientists, land managers, ranchers, policy makers, industry and ordinary citizens to share information and ideas and to try new approaches and to deliver landscape-scale management strategies that address the bird's habitat needs and maintains a way of life in the rural West.

The scope, scale and complexity of the state, federal and private conservation efforts accomplished by this diverse group in the past five years are unequalled in the history of wildlife conservation in the United States. The investments made to support this conservation effort have already improved the status of the sage-grouse and will continue to do so for the foreseeable future.

The greater sage-grouse conservation effort sets the bar for how complex, landscape-scale conservation challenges can be resolved through cooperative efforts by people and organizations with common goals. It also demonstrates that wildlife conservation and sustainable communities can go hand in hand, and that the Endangered Species Act is an effective tool for achieving that goal. Going forward, it will be essential for all the partners who contributed to this historic achievement to maintain momentum and keep advancing conservation in this American landscape.

11. How do federal land use plans function?

The BLM and USFS Land Use Plan revisions and amendments set goals and objectives and provide for management direction for greater sage-grouse habitat and conservation that apply to all BLM and USFS lands within the occupied range of greater sage-grouse. The plans provide a tiered management approach that offers higher levels of protection in the habitats with the highest density of sage-grouse, known as Priority Habitat Management Areas (PHMA). The plans seek to minimize impacts in other occupied habitat known as General Habitat Management Areas (GHMA), which are BLM or USFS-administered lands that require some special management to sustain greater sage-grouse populations, but are not considered as important as priority habitat. In addition, BLM and USFS have designated Sagebrush Focal Areas (SFA), a subset of priority habitat that represent important strongholds for greater sage-grouse. In these areas, federal land use plans avoid new surface disturbance and recommend that the areas be withdrawn from new hardrock mining claims.

Within Priority Habitat, federal plans reduce habitat fragmentation by establishing caps on surface disturbance and density, minimizing surface occupancy from energy development, identifying buffer distances around leks, directing wind and solar projects outside of priority habitat, and avoiding greater sage-grouse habitat in siting transmission corridors (with some exceptions). The plans set goals to improve habitat condition through required mitigation to a net benefit standard, and habitat improvement projects like conifer removal. BLM and USFS will incorporate management objectives for greater sage-grouse habitat and rangeland health standards for grazing permit renewals and permit modifications within greater sage-grouse habitat.

The plans also identify management actions intended to reduce the risk of rangeland fire by attacking the spread of cheatgrass and other invasive species, positioning wildfire management

resources for more effective rangeland fire response, and restoring fire-impacted landscapes to native grasses and sagebrush. The plans include coordinated monitoring and evaluation of species and habitat changes and mitigation efforts and adaptive-management measures to ensure the overall conservation objectives identified in the plans are being met.

12. How have the states contributed to greater sage-grouse conservation?

States have primary management authority for wildlife within their borders. Federal agencies have additional management and regulatory authorities related eagles, most migratory birds, and ESA-listed wildlife.

State plans are one of the principal elements of the greater sage-grouse conservation effort, along with federal land use plans and private conservation efforts. While the BLM and USFS influence wildlife by managing habitat on federal land, as do private landowners by managing habitat on private property, states manage wildlife regardless of property jurisdictions.

States in the greater sage-grouse range have actively participated in sage-grouse conservation since 1954, when the Western Association of Fish and Wildlife Agencies first began monitoring the abundance and distribution of the species across its range. WAFWA created the Management Zone framework under which greater sage-grouse populations are currently evaluated. Several of the foundational conservation plans that have guided sage-grouse management for the past 15 years were developed by WAFWA, including the 2004 Rangewide Conservation Assessment, the 2006 Greater Sage-Grouse Comprehensive Conservation Strategy and recent reports on wildfire and invasive plant management.

WAFWA estimates that the 11 states in the greater sage-grouse range have spent more than \$200 million on sage-grouse conservation in the past 15 years by investing in research, monitoring and management projects, including habitat protection through land purchases and conservation easements. Since 2010, states in greater sage-grouse range have updated or finalized conservation plans for the greater sage-grouse that complement federal land plans by implementing measures to conserve the species and its habitat on non-federal lands.

13. What are some examples of regulatory measures in state plans?

State sage-grouse plans in Wyoming, Montana and Oregon contain regulatory measures intended to minimize impacts from energy development, infrastructure and grazing. The Wyoming strategy has been in place since 2008 and has effectively minimized impacts within core habitats, protecting the highest density areas for the species within the state.

Since implementation of the **Wyoming** Core Area Strategy in 2008, the number of new oil and gas wells in greater sage-grouse habitat declined by 80 percent. While some development will occur in the future, the Wyoming Core Area Strategy directs projects to areas that will minimize impacts, includes stipulations to minimize indirect effects, and if necessary, requires mitigation to benefit the species.

The State of **Montana** has issued an executive order to implement the Montana Sage Grouse

Habitat Conservation Program and passed legislation to give it full regulatory authority on State lands and on any private lands where State permits or authorizations are required. The state has created the Montana Sage-Grouse Oversight Team composed of State Agency Directors to oversee administration of the Montana state sage-grouse plan. Over 70% of sage grouse habitat in Montana is on state and private lands.

Montana's state plan includes disturbance caps, restrictions on density of development, industry-specific stipulations, seasonal and noise controlled surface use restrictions, prohibitions on sagebrush eradication and conversion to cropland, new sage-grouse compatible grazing standards and permanent lek buffers. The Montana core area approach closely parallels the Wyoming core area strategy, which has a demonstrated track record of success over several years.

The **Oregon** Sage-Grouse Action Plan ensures regulatory protection and enhancement of sage-grouse and their habitat on state and private lands in Oregon through new land use regulations and an Executive Order, which establishes explicit habitat and population goals with incremental completion dates. The Oregon Plan prioritizes avoidance with standards for mitigation of impacts if necessary and includes regulatory mechanisms, such as disturbance caps and adaptive management triggers, to reduce impacts to sage-grouse in the State. The Oregon plan builds on the core area strategy utilized by Wyoming and Montana to address all sage-grouse habitats. Oregon's conservation plan applies to more than approximately 15 million acres of all landownership types.

The Oregon plan also addresses a primary threat in the Great Basin – wildfire, invasive annual grasses and conifers. Fire and the fire/invasives cycle can impact large areas of sage-grouse habitat in very short periods of time, making prevention of wildfire important for minimizing habitat loss. It identifies fire and invasive plant management measures, and the State has advanced significant new funding for implementation, such support for Rangeland Fire Protection Areas. This commitment improves the likelihood that fires will be effectively controlled to reduce the potential negative effects to sage-grouse habitat.

In Utah, an Executive Order provides a regulatory mechanism to minimize potential effects from mining to sage-grouse habitat on State and private lands. The Utah Executive Order requires the Utah Division of Oil, Gas and Mining to coordinate with the Utah Division of Wildlife Resources before issuing permits for energy development. It also directs the Utah Division of Oil, Gas and Mining to implement recommendations provided by the Utah Division of Wildlife Resources that could require avoidance and minimization measures on State and private lands consistent with the conservation plan. These measures are subject to the statutory requirements to protect rights on private property and avoid waste of the mineral resource.

14. What other state actions are contributing to the conservation of the species?

State plans take different approaches, but in general, they identify important conservation objectives and provide mechanisms to incentivize conservation. Some include regulatory mechanisms that apply to state approvals or actions. The Service anticipates state plans and related efforts will continue into the future and will strengthen as they mature.

California

California does not have a state sage-grouse conservation plan, in large part because California has a very small sliver of greater sage-grouse habitat. However, California has designated sage-grouse as a state-listed species of special concern that should be considered during the state's environmental review process. The California Environmental Quality Act requires that state agencies, local governments, and special districts consider impacts to sage-grouse from proposed projects. In addition, California played a key role in Service's April 2015 determination that the Bi-State population of greater sage-grouse does not require protection of the ESA.

Colorado

Colorado has worked with numerous partners over the last several decades at the local and state and range-wide level to conserve greater sage-grouse. Since 2003, more than 80,600 acres of greater sage-grouse habitat has been protected by Colorado Parks and Wildlife either through fee title purchase or conservation easements, at a cost of nearly \$53 million.

Colorado's greater sage-grouse plan has been implemented since 2008 over approximately 3.8 million acres across all land ownership types. The plan uses voluntary conservation strategies to address and promote the conservation of sage-grouse in Colorado. It provides guidance to address impacts to sage-grouse from habitat fragmentation and conversion, agriculture, urbanization, conifer encroachment, recreation, nonrenewable energy, and other impacts.

Colorado regulations require that the Colorado Oil and Gas Conservation Commission and the Colorado Department of Reclamation and Mining Safety consider recommendations from Colorado Parks and Wildlife to reduce impacts to greater sage-grouse during the permitting process.

In May 2015, Colorado's Governor issued an Executive Order to promote the conservation of greater sage-grouse and further implement the 2008 conservation plan. This order enhances communication and coordination among State agencies. Under the order, the Colorado Oil and Gas Conservation Commission will evaluate its existing wildlife siting rules for potential improvement and develop a comprehensive tracking system for development in sensitive wildlife habitat. The order also prioritizes the completion of the Colorado Habitat Exchange, the first voluntary compensatory mitigation program to be initiated for greater sage-grouse.

Dakotas

State management plans in North and South Dakota emphasize working cooperatively with private landowners due to the relatively large acreages of private lands in those states. Both states are continuing sage-grouse research efforts to prioritize the best sagebrush habitat for conservation, to expand core areas and improve their understanding of the impacts of West Nile virus. Both have also closed sage-grouse hunting seasons. NRCS's Sage Grouse Initiative is active in both states.

North Dakota completed its state conservation plan for sage-grouse in March 2015. It applies to approximately 416,000 acres of all landownership types in the state. The plan is voluntary and its implementation relies on partner-led efforts. North Dakota's plan focuses on translocating sage-grouse to supplement isolated subpopulations in an effort to slow a downward population trend.

South Dakota has provided additional firefighting resources and in the past has restricted off-road travel if drought conditions may elevate fire danger during hunting seasons. Further, the South Dakota Department of Game, Fish and Parks works with the South Dakota School and Public Lands Office, Public Utilities Commission, and the Department of Environment and Natural Resources to provide comments and input if oil and gas development, wind development, or other proposed projects may impact sage-grouse core areas.

Idaho

In May 2015 Idaho's Governor signed an Executive Order adopting Idaho's Sage-grouse Management Plan, which focuses on the management of invasive vegetation, fuels and wildfire. In issuing the Executive Order, the Governor directed that all state agencies apply the elements of the state plan to all land ownerships across the state, to the extent consistent with existing state law. The plan provides wildfire suppression guidance to complement Department of the Interior Order Number 3336 on rangeland fire, and commits the state to assist with fire rehabilitation and with implementation of fuel breaks, weed control and conifer removal in mixed state and federal ownerships.

Under the plan, Idaho assumes responsibility for development, coordination, equipping and training for Rangeland Fire Protection Associations to provide rapid response to sagebrush fires. In FY 2016 the Idaho legislature appropriated over \$500,000 to better support Rangeland Fire Protection Associations.

Idaho also intends to reduce state ownership of key sage-grouse habitats through land exchanges with the BLM to allow for more effective implementation of fire and invasive species controls.

Within Idaho, the Sage Grouse Initiative has worked with private landowners to secure conservation easements on approximately 70,000 acres, implement grazing systems on 250,000 acres and remove invasive conifers on 50,000 acres. Since 2002, Idaho local working groups reported completing close to 400 sage-grouse projects, including fire restoration, fuel breaks, fence marking and removal, conifer removal, weed control and sagebrush planting.

Idaho also recently completed a plan aimed at sage-grouse conservation on 600,000 acres of state endowment lands. Approximately 1.4 million acres of endowment land in Idaho are rangelands, and nearly half of these endowment rangelands are important to sage-grouse. The Idaho Plan provides management direction, including regulatory mechanisms, for state lands managed by the Idaho Department of Lands.

Montana

Montana is one of three states that have adopted state sage-grouse conservation plans that incorporate regulatory mechanisms. (See above for a discussion of the plan and executive order).

Montana Fish, Wildlife and Parks has been active in sage-grouse conservation for many years. The state has spent \$4.8 million on sage grouse monitoring, research, and planning between 2000 and 2014. Since 1980, the agency has invested approximately \$25 million in conservation easements for more than 175,000 acres within sage grouse range. The state has also contracted with private landowners for 30-year sagebrush conservation leases covering almost 200,000 acres.

Montana has increased its commitment to sage-grouse conservation with the passage of the Montana Sage-Grouse Stewardship Act during the 2015 legislative session. This Act ensures that

critical funding and support are available for necessary sage-grouse conservation efforts in the future. In addition to funding for Sage-Grouse Program staff resources to oversee implementation of Executive Order 12-2015, the Act includes a revolving grant-based sage- grouse habitat conservation fund with an initial balance of \$10 million.

Nevada

The State of Nevada has implemented several measures to conserve habitat in the state. The overarching objective of Nevada’s plan is a net conservation gain to sage-grouse habitat due to new human-caused disturbances within sage grouse management areas. The state’s objective is to maintain the current quantity and quality of sage-grouse habitat at the state-wide level by protecting existing sage-grouse habitat.

In 2008, the Governor of Nevada signed an Executive Order that directs the Nevada Department of Wildlife to work with state and federal agencies and the interested public to implement Nevada’s conservation plan. The Executive Order also directs other state agencies to coordinate with the wildlife agency in these efforts. Nevada has also established a state-run Conservation Credit System that creates a mitigation market to facilitate protection of sage-grouse habitat when development projects cause unavoidable impacts.

In November 2012, the Governor signed a second Executive Order establishing the Sagebrush Ecosystem Council, a multiagency and multidisciplinary group that was tasked with developing a conservation strategy for sage-grouse in Nevada. In October 2014, the Sagebrush Ecosystem Council finalized the Nevada Greater Sage-grouse Conservation Plan. The Nevada plan creates the Conservation Credit System, which creates financial incentives for private landowners to conserve sage-grouse habitat for use as compensatory mitigation. Nevada’s plan requires that any development that affects greater sage-grouse habitat in Nevada will need to acquire credits to compensate for those effects before the development proceeds. In addition, on June 23, 2015, the Governor signed emergency regulations enabling the creation of Rangeland Fire Protection Associations to support fire suppression efforts by adding capacity and resources for fire suppression.

Oregon

Oregon is one of three states that have adopted state sage-grouse conservation plans that incorporate regulatory mechanisms. (See above for a discussion of the plan and executive order.)

In 2012, the Oregon Sage-grouse Conservation Partnership, or SageCon, was convened at the request of the Governor’s office to formulate an “all lands, all threats” approach to sage-grouse conservation. This effort was to provide regulatory assurances in advance of the Service’s listing decision in 2015 and support long-term community sustainability in central and eastern Oregon. The primary goal of SageCon Partnership has been to amend the 2011 Oregon Sage-grouse plan to update the status of the species and its habitat conditions; identify conservation measures that have been implemented since 2010, and formulate new regulatory and voluntary programs to establish more predictability in the permitting process and ensure that mitigation dollars are invested in the highest value sage-grouse habitat.

Notably, more than 245,000 acres of conifer removal projects have been completed since 2010 on private and public land in some of the state’s most important sage-grouse habitats. The Oregon Watershed Enhancement Board has committed at least \$10 million dollars in state lottery funding over the next 10 years to implement state and local efforts for sage grouse habitat conservation and

restoration. In addition, through a broad network of candidate conservation agreements, hundreds of landowners have committed over 2 million acres of sage-grouse habitat to conservation plans. Oregon Soil and Water Conservation Districts and ranchers are receiving \$9 million from the NRCS to implement our CCAAs with the counties.

Washington

The greater sage-grouse is protected as a threatened species under Washington statutes and the state has been conserving the bird under a state plan first developed by the Washington Department of Fish and Wildlife in 2004. The plan identified a recovery goal of average breeding season populations of at least 3,200 birds for a period of 10 years, with active lek complexes in six or more sage-grouse management units. To meet this goal, the state, the Army and the Yakama Nation have been reintroducing sage-grouse to Lincoln County and the Yakama Nation and augmenting the population of sage-grouse within Department of Defense lands for eight years. The state is developing a Candidate Conservation Agreement with Assurances for private landowners and state wildlife areas within central Washington to minimize or remove threats to sage-grouse associated with agriculture and grazing.

In addition, the Service has worked with the Foster Creek Conservation District in Douglas County to develop a multi-species conservation plan to maintain or improve habitat on private lands for greater sage-grouse, Columbia Basin pygmy rabbits, sharp-tailed grouse and other species. The proposed plan will cover up to approximately 879,000 acres of private agricultural lands and provide assurances to landowners that their ongoing agricultural activities are in compliance with the ESA while supporting sustainable agricultural operations.

Wyoming

Wyoming was one of the first states in the greater sage-grouse range to have a conservation plan supported by the Service. Additionally, Wyoming is one of three states that have adopted state sage-grouse conservation plans that incorporate regulatory mechanisms. (See above for a discussion of the plan and executive order.)

One of the most important elements of Wyoming's approach was the creation of the Sage Grouse Implementation Team, which includes representatives of state and federal agencies, non-governmental organizations and industries. The team makes recommendations to the Governor for continued conservation of greater sage-grouse through the executive orders. The latest executive order was signed by Governor Mead on July 29, 2015.

The State of Wyoming's Core Population Areas cover the largest populations and most productive habitats that meet all life history requirements for the species. The Wyoming Strategy is based on avoiding impacts that would deter sage-grouse utilization. The key component of the Wyoming Strategy is the application of state regulatory measures to projects that require state authorization on all 15 million acres of sage-grouse habitat in Wyoming. Any project requiring a state permit must meet the conditions of the strategy regardless of land ownership. The federal plans in the state incorporate the Wyoming strategy, thereby ensuring implementation of the strategy on federal land surfaces and subsurface regardless of the need for a state permit.

In addition to the core area strategy, private landowners have helped protect sage-grouse habitat by participating in a \$250 million Sage Grouse Initiative conservation easement campaign that has prevented urbanization in some of the most bird abundant and at-risk landscapes in Wyoming. The combination of the Wyoming core area policy and future conservation easements funded

through the Sage Grouse Initiative will result in significant additional protection of sage- grouse habitat in the state during the foreseeable future.

Utah

Utah issued a final conservation plan for the sage-grouse on February 14, 2013, and mandated its implementation on February 25, 2015 by Executive Order. Utah's Plan and Executive Order include limited regulatory mechanisms addressed above.

The Utah state plan addresses threats to sage-grouse associated with fire, invasive species, predation, conifer encroachment, recreation, energy development, and the removal of sagebrush. The Utah plan applies to all lands within the state's 11 Sage-Grouse Management Areas across approximately 7.5 million acres, which conserves 90 percent of the state's greater sage-grouse habitat and approximately 94 percent of the population. Many of the conservation measures in the plan are voluntary and rely on negotiated incentive-based covenants, easements, or leases to achieve conservation on private lands, School and Institutional Trust Administration Lands, and local government lands. In 2014, Utah's incentive-based approach, coupled with efforts from state, federal, and private partners, exceeded the Utah conservation plan objectives, reporting that about 250,000 acres of habitat enhancement and restoration had already occurred throughout the state.

The Utah plan provides an organizational framework to leverage funding and agency resources to help partners prioritize wildfire suppression and rehabilitation efforts. The Utah Governor's Executive Order also directs the Utah Division of Forestry, Fire and State Lands to prioritize fuels-mitigation activities and pre-attack planning and coordination with other federal and local fire suppression partners in sage-grouse habitat, second only to the protection of human life and structures. Utah's 2013 Catastrophic Wildfire Reduction Strategy established a statewide steering committee and regional working groups to develop a statewide risk map that will include prioritized sage-grouse habitat areas.

15. What role have private landowners played in greater sage-grouse conservation efforts?

Greater sage-grouse use both public and private lands during their annual lifecycle, with private lands becoming extremely important during the summer brooding season, when females rear chicks to adulthood. Young greater sage-grouse depend on wet meadows and habitat adjacent to wetlands that is often found on private ranches, so conservation of habitat on private lands is an important part of the all-lands strategy for this species.

Since 2010, the Sage Grouse Initiative, the Service and numerous other partners have targeted the best privately owned greater sage-grouse habitat for enrollment in voluntary conservation programs. Through 2015, the Sage Grouse Initiative and its partners have invested \$425 million in private-land conservation, enrolling more than 1,120 ranches and more than 4.4 million acres in programs that manage habitat for the benefit of greater sage-grouse, including more than 450,000 acres of conservation easements that eliminate the risk of development. The U.S. Department of Agriculture has committed another \$211 million to the Sage Grouse Initiative, with a goal of protecting 8 million acres of sage-grouse habitat by 2018.

The Service's Partners for Fish and Wildlife program has also engaged private landowners in a variety of voluntary conservation efforts to restore and enhance upland, wet meadow and riparian habitat for the benefit of the species. The primary mechanism used by Partners is a private

landowner agreement: a voluntary, 10-year agreement between the Service and a landowner. Since 2000, Partners has contributed \$22 million toward private lands projects valued at nearly \$43 million that implemented on-the-ground habitat restoration to support the recovery of greater sage-grouse and keep landowners on the land.

A third way to conserve private lands habitat is through the Service's Candidate Conservation Agreement program. This program includes Candidate Conservation Agreements with Assurances (CCAAs), which is a voluntary program that allows private landowners to enter an agreement with the Service for 30 years, during which time the landowner commits to forgoing development that would pose a threat to sage-grouse and implementing habitat programs in exchange for the Service's assurance that in the event of an ESA listing, no additional regulatory measures would be required. The program also covers candidate conservation agreements (CCAs) with public lands agencies that provide for species' conservation.

In Oregon, private landowners who control more than 2 million acres of greater sage-grouse habitat have enrolled or signed letters of intent with the Service to enroll in CCAAs. Private landowners have also worked with the BLM to commit 2.1 million acres of public grazing allotments to CCAs extending their private-land stewardship to public lands.

In Wyoming, about 445,000 acres of private land have been enrolled in CCAAs and another 855,000 acres of associated grazing BLM allotments have been enrolled in CCAs. These agreements conserve sage-grouse habitats and maintain the open spaces these birds, and other sagebrush obligates, require.

These private-land programs have complemented state and federal plans in extending sage-grouse conservation across the landscape.

16. The Conservation Objectives Team report delineated Priority Areas for Conservation (PACs) as important areas necessary for the future conservation of the species. How were PACs impacted by conservation plans and actions put into place since 2010?

- The Conservation Objectives Team Report was a collaborative effort by federal agencies and the states to delineate the most important habitats for greater sage-grouse conservation as well as the primary threats to the survival of the greater sage-grouse. The report identified concentrations of birds and the habitats necessary for the persistence of the species as Priority Areas of Conservation or PACs. The PAC concept has been the foundation for federal and state conservation sage-grouse planning.
- Federal land management agencies (BLM and USFS) incorporated the PACs in the designation of Priority Habitat Management Areas (or PHMAs).
- The Conservation Objectives Team Report made clear that "maintenance of the integrity of PACs ... is the essential foundation for sage-grouse conservation." For this reason, the BLM and Forest Service plans include land allocations and management actions that avoid and minimize surface disturbance in priority habitat for identified threats (e.g., energy, mining, infrastructure, improper grazing, free-roaming equids, recreation and urbanization). In addition, efforts to prevent rangeland fires, to focus fire suppression activities, and to restore fire-impacted lands will be focused on priority habitat in the western portion of the sage grouse range, where fire is the greatest threat to the species.
- States have utilized the PACs as the basis for "core areas" in Wyoming and Montana, sage-grouse management areas in Utah, or important and core examples.

- The NRCS Sage Grouse Initiative has targeted the vast majority of their actions and investments to private land within PACs.

IV. Addressing Threats to Sage-Grouse

17. What are the potential threats to the species?

The most significant threat to the species is habitat loss and fragmentation due to a variety of causes.

In the Rocky Mountain portion of the range, sagebrush habitats have become increasingly degraded and fragmented due to fossil fuel and renewable energy development, infrastructure such as roads and power lines, mining, improper grazing, the direct conversion of sagebrush to croplands, and by urban and ex-urban development.

In the Great Basin, incursions of invasive plants such as cheatgrass and conifer, increases in wildfire size, frequency and intensity fueled by invasive plants, along with improper grazing from domestic livestock and free-roaming horses and burros, drought, and mining have eliminated the habitat and degraded the value of large areas of sagebrush habitat for greater sage-grouse. The threat of habitat loss to fire and invasive species can be exacerbated by even small amounts of development in important habitat.

Impacts from these stressors have been exacerbated by the lack of adequate regulatory mechanisms to control their effect on sagebrush habitat. In the finding the Service discusses how these threats have been ameliorated.

18. What regulatory measures have been implemented since 2010 to better protect greater sage-grouse?

The BLM and USFS have each completed amendments or revisions to 98 land management plans governing greater sage-grouse habitat. The Service provided technical assistance during the development of these federal land use plans, which are the principal regulatory documents for the activities allowed on BLM and USFS lands. This federal greater sage-grouse planning effort is unprecedented in scope and scale, and represents a significant change from managing within administrative boundaries to managing with an ecosystem approach with a goal of balancing the agencies' multiple-use mandates with conservation objectives.

Since 2010, states within the range of the species range have updated, finalized or implemented conservation plans for the greater sage-grouse. These plans take different approaches, but in general, they identify important conservation objectives for greater sage-grouse and include mechanisms to incentivize conservation. In particular, state plans developed by Wyoming, Montana and Oregon contain regulatory provisions that provide certainty and will help to reduce habitat loss and fragmentation in the best remaining greater sage-grouse habitat.

19. How did the Service estimate the amount of breeding habitat on which threats have been reduced?

The Service used habitat characteristics around known breeding areas (leks) to predict where

else breeding habitat occurred in occupied range. Approximately 90% of the resulting modeled area of predicted breeding bird habitat is covered by protections in federal land use plans and Wyoming, Montana and Oregon state plans. While the important habitats protected by the federal land use plans include some small inholdings of non-federal land, those inholdings occur primarily in Wyoming, Montana, and Oregon, where the Service is confident that the respective state plan protections will protect habitat in those inholdings.

20. How do the conservation actions address the threat of invasive species and fire in greater sage-grouse habitat?

Wildfire is the primary threat to the sagebrush ecosystem in the western portion of the remaining range of the greater sage-grouse. Over time, human activities have changed the vegetation composition and structure of the sagebrush ecosystem in ways that have promoted more frequent and more damaging fires. Non-native annual grasses such as cheatgrass are an aggressive invasive species that now cover millions of acres of rangelands in the Great Basin and are slowly expanding into the eastern portion of the sagebrush landscape. When cheatgrass becomes established, it can fuel destructive wildfires and represents a significant threat to the long-term conservation of greater sage-grouse and its habitat, particularly in the Great Basin. Fires can cause direct loss of habitat, resulting in loss of breeding, foraging and sheltering opportunities for the species. In addition to the direct habitat loss, cheatgrass can take over fire scars, creating large areas devoid of sagebrush habitat that serve as functional barriers to greater sage-grouse movements and dispersal.

Since 2010, the wildland fire management community has made strides in addressing wildfire and its effects on habitat fragmentation on greater sage-grouse habitat. The BLM-USFS plans contain multiple measures to address wildfire, including measures to reduce the risk of rangeland fires through better treatment of fuels and the creation of firebreaks to check the spread of fires when they occur. In collaboration with the Western Associations of Fish and Wildlife Agencies, the BLM and the Forest Service conducted an assessment of areas across the Great Basin. Using the Fire and Invasives Assessment Tool (FIAT), the federal land management agencies can better target efforts to protect and restore the most important resistant and resilient habitat areas.

In addition, in November 2014 the BLM convened a conference on rangeland fire bringing research scientists, land managers, and firefighters together with state and local officials, policymakers and stakeholders to develop a new strategy to attack the threats of invasive non-native species and wildfire. That conference led to a Secretarial Order by Secretary Jewell -- Secretarial Order 3336 Rangeland Fire Prevention, Management and Restoration -- that directed the development of a multi-agency strategy to address rangeland fire. The resulting strategy, [*Integrated Rangeland Fire Management Strategy*](#), is currently being implemented and includes: efforts to prevent rangeland fires; to better suppress them (such as through the repositioning of firefighting assets near high value habitat areas and improved training for rural fire fighters); and to improve post-fire success in rehabilitating areas affected by fire and restoring them to native vegetation. In addition, the BLM recently announced a [National Seed Strategy](#) to increase the production, storage, and use of seed stocks from native vegetation to improve restoration success across the Great Basin.

Wildfire managers are focusing their operations on protecting greater sage-grouse and sagebrush habitat. Sagebrush habitats are now given priority consideration in the treatment of

fuels and the rehabilitation of burned areas, after the protection of human health and safety. The continued long-term implementation of these wildfire management strategies, particularly in important greater sage-grouse habitats, reduces the risk of fire and invasive species in the Great Basin and rangewide.

Controlling both invasive grasses and rangeland fires must remain a primary focus of collective conservation efforts.

21. How much habitat has been lost during the 2015 fire season thus far?

There was a total of 533,182 total acres of habitat burned as of September 11, 2015. Of that, 207,387 acres were in Priority Habitat and only 112 acres were in Sagebrush Focal Areas. Of the fires burning in sage-grouse habitat, one fire, the Soda Fire, accounted for most of the acreage, burning 280,000 acres in extreme wind-driven conditions in Idaho.

Given the importance of the landscape burned, the Soda Fire has resulted in rapid and unprecedented response by rehabilitation specialists. An interagency Burned Area Emergency Response Team has already begun to develop plans for restoration of the area. The Service provided nearly \$130,000 in seed money to start restoration projects on private lands within the burned area; the BLM will focus its efforts on the public lands impacted by the fire, while NRCS will provide technical support and funds to assist in restoring habitat on private lands that were burned. The project will likely take several years, however, the federal agencies have committed to use the restoration effort as a pilot to evaluate various approaches and strategies for restoring native vegetation and sagebrush cover.

22. How do the conservation actions address the threat of oil and gas development in greater sage-grouse habitat?

Oil and gas development is likely to continue throughout the greater sage-grouse range into the future, although its form and extent across the landscape may change.

For this status review, the Service mapped locations of the highest potential for oil and gas development in Montana, the Dakotas, Wyoming, Colorado and northeastern Utah to quantify potential exposure of greater sage-grouse to risk of future development.

The Service's analyses indicate that the federal land use plans and the Wyoming Core Area Strategy are reducing exposure of the species to fossil fuel development, as measured by the portions of the breeding population and breeding habitat. The Service estimates that the vast majority of lands with a high- to moderate potential for oil and gas development are outside Priority Habitat. Regulatory mechanisms further reduce the risk of nonrenewable energy exposure to the breeding population and breeding habitat by more than 35 percent in Montana, Wyoming's Powder River Basin and the Dakotas, and more than 60 percent in the rest of Wyoming and adjacent portions of Colorado and Utah.

23. How do the conservation actions address the threat or impact of infrastructure development in greater sage-grouse habitat?

Expanding human settlement in the western United States has led to an increase in demand for infrastructure to support development. Roads, railroads, power lines, communication towers,

wind turbines and fences result in habitat loss and fragmentation, and can cause greater sage-grouse to avoid otherwise suitable habitat. Infrastructure can also facilitate the spread of invasive plants, increase fire risk, and provide food, water and perches for predators, which may increase densities of ravens, foxes, skunks and other predators.

Since 2010, a number of landscape-scale efforts have been undertaken to reduce impacts from existing and future infrastructure to greater sage-grouse across the range. Those efforts include federal land use plan amendments, state sage-grouse plans, Sage Grouse Initiative projects and CCAs.

In Priority Habitat, federal land use plans are designed to avoid or minimize infrastructure development, with limited exceptions for new transmission rights-of-way. They also include seasonal timing restrictions, noise restrictions, buffer distances from leks, and required design features to minimize infrastructure impacts on greater sage-grouse. State sage-grouse plans in

Wyoming, Montana, Oregon and Utah contain regulatory measures intended to minimize impacts from infrastructure on state lands and, in some instances, on private lands.

24. How do the conservation actions address the threat of grazing in greater sage-grouse habitat?

Livestock grazing is the most widespread land use in the sagebrush ecosystem. Improper grazing (by domestic livestock and free-roaming horses and burros) can have negative impacts to sagebrush and greater sage-grouse at local scales; however, in 2010, the Service did not find that this was a principal factor affecting the status of the species. Livestock grazing may positively or negatively affect the structure and composition of greater sage-grouse habitat, depending on the intensity and timing of grazing, and local climatic and ecological conditions.

Properly-managed grazing may benefit greater sage-grouse by maintaining perennial vegetation that provides important food and cover for greater sage-grouse and by helping to control invasive annual grasses and woody plant encroachment. Alternatively, improperly-managed grazing can reduce protective vegetative cover, may make nesting and brood-rearing habitats less suitable for greater sage-grouse and provide a vector for the spread of invasive grasses. Livestock can also trample or disturb nests and cause nesting females to flush from the nest, revealing the eggs to nest predators such as ravens.

While the Service's view that grazing is not a primary threat to the species has not changed since 2010, new range health measures in federal plans will likely improve habitat conditions across the range.

25. How do the conservation actions address the threat of free-roaming equids in greater sage-grouse habitat?

Domestic horses and burros were first brought to western North America by European explorers and traders in the late 16th century. Over time, free-roaming populations were formed by animals that escaped captivity or were released. Since passage of the Wild Free-Roaming Horses and Burros Act of 1971, herd numbers have risen and fallen dramatically. Currently, the BLM and USFS estimate about 65,000 horses and burros roam on federally administered rangelands in

10 western states, roughly double the estimates of the amount the land is estimated to be able to support. An undetermined number roam tribal lands.

Because of physiological differences, a horse forages longer and consumes 20 to 65 percent more forage than a domestic cow of equivalent body mass. Horses and burros crop vegetation closer to the ground than cattle or big game, potentially reducing cover for greater sage-grouse and limiting or delaying recovery of plants. Horses and cattle use the landscape differently, increasing the area impacted by grazing when both are present.

Management of herds by federal agencies is an ongoing challenge. Free-roaming horse and burro populations grow rapidly, and in most areas, they have no natural predators. Gathering and removing horses and burros for adoption, or sale is expensive and highly controversial.

New federal land use plans address free-roaming equids' impacts by focusing management efforts in areas most important for greater sage-grouse conservation. If needed to meet range health and greater sage-grouse objectives, the plans allow for "gathers" and other population control techniques in priority habitat areas. Additionally, if needed, free-roaming equids would be removed or excluded from areas following emergencies, such as wildfire or drought.

Implementation of all or some of the measures outlined in the plans will reduce impacts in the most important areas for greater sage-grouse. Nevertheless, some localized degradation of habitat will likely continue, particularly in Nevada, as these measures take effect.

V. Looking Forward

26. What does the future hold for greater sage-grouse conservation following this decision?

The Service's not-warranted finding for greater sage-grouse is an important milestone in an ongoing, range-wide campaign to conserve the species and the larger landscape on which it and many other species depend. Greater sage-grouse will still require intensive, conservative management into the future. An ongoing and concerted effort by all partners – public and private – is needed to maintain and advance conservation measures, and control impacts to the bird and its habitat.

The Service will remain an active partner in sagebrush conservation and will continue to invest in new science, management techniques, technical assistance for partners and in private lands programs to help landowners conserve habitat on their own land. The Service has committed to monitoring all of the continuing efforts and population trends, as well as to evaluate the status of the species in five years.

Federal land use plans contain specific, measurable actions to reduce disturbance that affects greater sage-grouse and its habitat. These plans also include monitoring and adaptive management programs that will enable managers to track and quickly adjust plans in response to biological feedback mechanisms. The federal land use plans are likely to be implemented for 20 to 30 years, and any amendments will be subject to extensive environmental review, ensuring these conservation efforts will continue into the future.

The Service anticipates state plans and related efforts will strengthen as they mature and develop track records of success. Private lands conservation programs, such as the NRCS's Sage Grouse

Initiative and the Service's Candidate Conservation and Partners for Fish and Wildlife programs will continue to recruit new landowners into sagebrush management and restoration programs.

It is important to recognize that the threats to greater sage-grouse and its habitat – fire and invasive plant species, population growth, and climate change – are not going away. The federal, state and private conservation measures described in the Service's finding across every state in the range – and robust monitoring and adaptive management programs associated with those measures – must continue into the future if we are to avoid continued decline of the species and a potential future listing under the ESA for greater sage-grouse or other at-risk, sagebrush- dependent species. Continued, dedicated funding for all aspects of greater sage-grouse and sagebrush conservation is a critical component of successful future conservation efforts.

27. What can landowners do to help?

The hard work must continue in order to restore sagebrush ecosystems and reverse the long-term decline of greater sage-grouse. For those private landowners wanting to contribute to the recovery of greater sage-grouse there are numerous programs available within the Service and through other agencies and organizations.

On August 27, 2015, U.S. Department of Agriculture Secretary Tom Vilsack announced priorities for the Sage Grouse Initiative to continue to spend down what is expected to be an additional \$211 million in Farm Bill funding through 2018 to continue working with ranchers across the range. The Sage Grouse Initiative estimates that by 2018, a total of \$760 million will have been invested by the program and partners to reach a goal of protecting sage-grouse habitat on 8 million acres of private ranchlands. See <http://www.sagegrouseinitiative.com/> for more information.

Since 2013, the Service and the BLM have enrolled or secured commitments from ranchers controlling 5.5 million acres to participate in voluntary Candidate Conservation programs (some of which overlap with Sage Grouse Initiative enrollments). The Service will continue to provide this assistance in the years ahead.

The Service will also continue to provide financial and technical assistance to landowners seeking to conserve listed species on their private land through its Partners for Fish and Wildlife Program. For more information on these tools, see <http://www.fws.gov/endangered/landowners/landowner-tools.html>.

28. Where can I obtain more information related to the listing?

For more information about the greater sage-grouse, the final listing and critical habitat decision, visit the Service's web site at <http://www.fws.gov/greaterSageGrouse/>.