From:	Melissa Faigeles
To:	"Alt, Nicole"
Subject:	RE: scheduling next GSG conservation efforts working group call
Date:	Wednesday, September 18, 2013 2:59:13 PM
Attachments:	NTSGConservation Action Plan.pdf

Is this the RISC Team you were referring to earlier?
Melissa

* *

Melissa Faigeles
Sagebrush Ecosystem Program Technical Team
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From: Alt, Nicole [mailto:nicole_alt@fws.gov]
Sent: Tuesday, September 17, 2013 8:16 AM
To: johnharja@utah.gov; Carmen Bailey; Melissa Faigeles; virgil.moore@idfg.idaho.gov; cwightman@mt.gov; Bob Budd; Jesse DElia; Pat Deibert; Matt Kales; Drue DeBerry; Tim.Griffiths@mt.usda.gov; Finley, Marlene -FS; Stephen Small; Jeff Everett; Lief Wiechman
Subject: Re: scheduling next GSG conservation efforts working group call

On the the call today, we'd like to walk through the threats identified in the COT report and review the list of actions or measures that we brainstormed to add any additional measures or actions that will have a population or PAC level benefit or impact. For the State and Federal agencies, please think about the actions you are implementing or recommending being implemented to address the threats so we can capture those within the measures.

Nicole

Nicole Alt
Deputy ARD Ecological Services
Mountain-Prairie Region
nicole_alt@fws.gov

On Mon, Sep 16, 2013 at 3:52 PM, Alt, Nicole <nicole_alt@fws.gov> wrote:
Just a reminder that we're having a metrics team call tomorrow morning to continue the discussion regarding the efforts to be reported. We're still working the document to help frame the discussion and seek your feedback and input on the call tomorrow. I'll send that out first thing tomorrow morning.

Call information
877-901-6917

passcode: 4401420#

Nicole

Nicole Alt
Deputy ARD Ecological Services
Mountain-Prairie Region
nicole_alt@fws.gov

On Wed, Sep 4, 2013 at 2:23 PM, Alt, Nicole <nicole_alt@fws.gov> wrote:
It looks like Sept. 17 works best for those that responded to the poll for our next call. Please hold 10 am - noon MT on your schedules for our next call. The FWS is working on a draft document to share with you before the call and to use as a basis for this continued discussion. We'll send details as we get closer to the call.

Nicole

Nicole Alt
Deputy ARD Ecological Services
Mountain-Prairie Region
nicole_alt@fws.gov

On Thu, Aug 29, 2013 at 1:53 PM, Alt, Nicole <nicole_alt@fws.gov> wrote:

> Please respond to the doodle poll below regarding you're availability for our next call. We'll be working internally before our next call to add some structure and substance to the discussion to continue the dialogue in the working group.
>
> http://www.doodle.com/5dmnuk5z95n5ippr
>
> Please also let me know your avaialbility for a 2 day meeting during the following weeks. Thanks.
>
> Sept. 30 - John H. Nicole (9/30-10/1)
> Oct. 7 - John H., Nicole
> Oct. 14 - Nicole
>
> Nicole
>
> Nicole Alt
> Deputy ARD Ecological Services
> Mountain-Prairie Region
> nicole_alt@fws.gov

Range-wide Interagency Sage-Grouse Conservation Team

Near-Term Greater Sage-Grouse Conservation Action Plan

Presented to
Greater Sage-grouse Executive Oversight Committee
&
Sage-Grouse Task Force
Hilton Head, South Carolina

Near-Term Greater Sage-Grouse Conservation Action Plan

Prepared by

Range-wide Interagency Sage-grouse Conservation Team

September 11, 2012

Range-wide Interagency Sage-Grouse Conservation Team members;

Agency	Name
Alberta Fish & Wildlife Div, SRD	Dale Eslinger
British Columbia	Alicia Goddard
California Fish and Game	Scott Gardner
Colorado Division of Parks and Wildlife	Kathy Griffin
Idaho Fish and Game	Don Kemner
MT. Fish, Wildlife and Parks	Catherine Wightman
Nevada Department of Wildlife	Shawn Espinosa
North Dakota Game and Fish	Aaron Robinson
Oregon Fish and Wildlife	Dave Budeau
	Autumn Larkins
Saskatchewan, Fish and Wildlife Branch	Beatriz Prieto
So. Dakota Game, Fish and Parks	Travis Runia, Sr.
Utah Div. of Wildlife Resources	Jason Robinson
Washington Dept. of Wildlife	Mike Schroeder
Wyoming Game and Fish Dept.	Tom Christiansen
Bureau of Land Management	Robin Sell
	Jessica Rubado
Farm Service Agency	Rod Hamilton
Fish and Wildlife Service	Pat Deibert
Natural Resources Conservation Service	Tim Griffiths
	Jeremy Maestas
U.S. Forest Service	Clint McCarthy
U.S. Geological Survey	Marty Fitzpatrick
Facilitator	San Stiver
WAFWA Director	Ken Mayer

Introduction

Background

In December 2011, Wyoming Governor Matt Mead and Secretary of the Interior Ken Salazar co-hosted a meeting to address coordinated conservation of the Greater sage-grouse (sage-grouse) across its range. Ten states within the range of the sage-grouse were represented, as were the U.S. Forest Service (USFS), the Natural Resources Conservation Service (NRCS), and the Department of the Interior (DOI) and its Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (FWS). The primary outcome of the meeting was the creation of a Sage-Grouse Task Force (Task Force) chaired by Governors Mead (WY) and Hickenlooper (CO) and the Director of the BLM. The Task Force was directed to develop recommendations on how to best move forward with a coordinated, multi-state, range-wide effort to conserve the sage-grouse, including identifying conservation actions that could be taken in the short term (2 to 3 years) that would benefit sage-grouse (e.g. stabilization of population trends) or the habitat on which they depend (e.g. reduction of habitat loss, fragmentation or degradation)

Photo Credit Bill Allard

In 2008 a Memorandum of Understanding (MOU) was signed by the eleven western states and three provinces where sage-grouse reside, Department of Interior agencies including BLM, FWS, and U.S. Geological Survey (USGS) and Department of Agriculture Agencies including Farm Service Agency (FSA), USFS and NRCS, with the express purpose of implementing sage-grouse conservation. Two teams were created by this MOU - the Range-wide Interagency Sage-grouse Conservation Technical team (RISCT) and the Greater Sage-grouse Executive Oversight Committee (EOC). The EOC is populated by executive staff personnel with decision authority, designated by the agency administrator or director. The RISCT is populated by the technical or science staff of the respective agency and provide scientific and technical expertise to provide conservation recommendations and support the actions of the EOC. Both teams have extensive experience with sage-grouse and sagebrush habitats

On March 23, 2010, FWS determined that the Greater sage-grouse (*Centrocercus urophasianus*; sage-grouse) and the Bi-state (California/Nevada) Distinct Population Segment (DPS) of the Greater sage-grouse warranted the protections of the Endangered Species Act of 1973, as amended, 1531 *et seq*. (ESA). However, the FWS also found that listing was precluded due to other higher priority

actions, thereby making the sage-grouse and the Bi-state DPS candidate species under the ESA. Subsequently, the Service entered into a court-approved settlement agreement with environmental groups which set a schedule for making listing determinations on over 200 candidate species nationwide, including the sage-grouse and its DPSs. The schedule indicated that a decision (proposed listing rule or withdrawal) on the Bi-state DPS was due by FY2013 (September 2013) and a decision on the sage-grouse range-wide was due by FY2015 (September 2015). On June 29, 2012 the Task Force delivered a letter to the EOC requesting the "identification and implementation of near-term actions that can contribute to a desirable status for sage-grouse by the 2015 deadline", with the intent that application of those actions would contribute to precluding the need to list the species.

The EOC met on July 20, 2012 and responded to the Task Force's request. Specifically, the EOC committed to have their RISCT evaluate risks to populations, conservations measures that address those risks, by area; expected outcomes and the resources needed to accomplish those conservation measures and prioritize those actions." This report is the output of that request.

Scope of Conservation Actions

The RISCT considered several resources to identify and prioritize threats that could be addressed in the short term, including the 2006 Conservation Strategy, the FWS 2010 listing review, and the recently released report from the FWS-led Conservation Objectives Team (COT). The COT was formed to define the degree to which the threats need to be ameliorated to conserve the sage-grouse so that it is no longer in danger of extinction or likely to become in danger of extinction, by 2013 for the Bi-state Distinct Population Segment (DPS), and 2015 for the Greater sage-grouse range-wide. Their report is currently under-going a scientific peer review. In their 2010 listing review the FWS identified two factors that resulted in the warranted, but precluded determination: the present or threatened destruction, modification of curtailment of its habitat or range, and the inadequacy of existing regulatory mechanisms to protect habitats. While there are other threats to this species (e.g. disease), they did not rise to the level of a warranted listing determination. Since the request from the Task Force focused on short-term conservation actions in order to preclude listing, the RISCT will not consider these other threats at this time.

Using the resources identified above the RISCT narrowed its focus to the following **habitat-related** threats: sagebrush elimination, conversion of sagebrush for agriculture, wildfire, weeds/annual grasses, conifer encroachment, energy development, mining, infrastructure (e.g. roads, transmission lines), poor grazing management, feral horses, recreational activities, urbanization, drought and climate change. We addressed the need for a sustained effort due to the very slow response time for sagebrush ecosystems with the addition of the North American Sagebrush Ecosystem Conservation Act (NASECA). Due to the short-time frame for implementation, conservation actions for climate change are not addressed in this report. The remaining threats were prioritized by their severity, scope and imminence using the following criteria:

- Threat is substantial and imminent (threat is moderate to severe and imminent for most (> 60 percent) of the population or area);
- Threat is moderate and imminent (threat is moderate to severe and imminent for a significant proportion (20-60 percent) of the population or area); and

- Threat is localized, but substantial threat (threat is moderate to severe for a small but significant proportion of the population or area).

Threats were examined at the population and Management Zone (MZ; Stiver et al. 2006) scale. While each of the above threats were considered (Table 1), only the top 3 to 4 threats for each MZ, as identified by the 2006 Conservation Strategy and the COT report, are included in the attached conservation action sheets. Addressing these threats will have the greatest likelihood influencing the 2015 listing determination. The RISCT cautions, however, that all threats affecting a population or management zone should be addressed and this report should not be used to exclude conservation actions for threats not included here.

Table 1: Selection and Prioritization of Habitat-Related Threats for Short-Term Conservation Actions. Threats were identified using the 2006 Conservation Strategy, the 2010 FWS listing determination and the COT report, and subsequently reviewed imminence and magnitude, and for the ability to effect meaningful short-term conservation.

Threats	Addressed	Reason for exclusion
Agricultural Conversion	Yes	
Conifer Encroachment	Yes	
Energy Development	Yes	
Exotic Annual Grasses	Yes	
Feral horses	No	Enforcing existing regulations will address concern
Grazing management	No*	Low severity, dispersed
Infrastructure	Yes	
Mining	No	High severity, low acreage
Lack of Support for Long-Term Conservation	Yes	
Recreation	No	Low severity, dispersed
Sagebrush Elimination	No	Low severity
Urbanization	Yes	
Wildfire	Yes	

* Grazing issues are addressed indirectly in the exotic annual grasses and agricultural conversion threat strategies.

The RISCT recognizes that significant conservation efforts have been initiated across the range of the sage-grouse. These efforts have neither been implemented long enough, nor at a sufficient scale to completely ameliorate threats. While the RISCT is silent on many efforts that are underway, we acknowledge their value and support their continuation.

Organization of this report

This report is divided into three sections. The **introduction section** provides the background of the request, team backgrounds, document scope, and decision criteria.

The **Conservation Action Worksheet section** provides the reader with the threat addressed and segments identifying the need, priority landscapes, strategy, conservation actions, professional

judgment of the resources needed, summary, barriers, outcomes and key organizations needed to address the threats and the expected outcomes. Costs are estimates using the Greater Sage-grouse Comprehensive Conservation Strategy, unless more current estimates are available. The costs are cumulative for a 3-year period unless otherwise noted. The Conservation Worksheet is not designed to provide operational details, but rather an overview of actions the RISCT suggests addressing the threats. We understand and support the enlistment of technical expertise to flesh out specific technical applications. An example considers a suggestion that the Boise Interagency Fire Center (BIFC) develop a Fire Suppression Strategy within the Wildfire Threat Conservation Worksheet. The RISCT suggests BIFC to develop the Strategy, but if there is a more appropriate avenue to meet the conservation strategy, we encourage that approach.

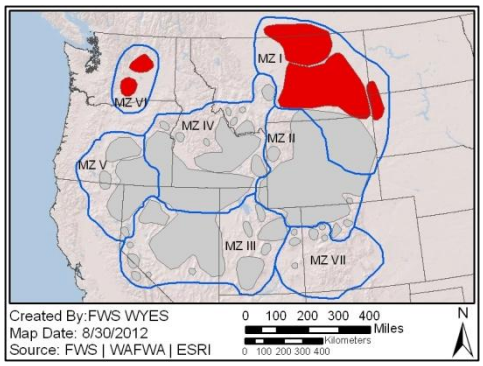
The **Summary section** provides the reader with a rollup of the threats addressed, priority, expected outcomes and a summary of costs.

Wyoming sunrise with smoke from California, Nevada and Oregon sagebrush fires (August 2012). Photo Credit Bill Allard

Conservation Action Worksheets

Conifer Control. Photo Credit Jeremy Maestas

Threat: Agricultural Conversion



Purpose & Need: Conversion of native sagebrush to tillage agriculture continues to create permanent habitat loss and fragmentation. Efforts are being applied to minimize conversion; however, additional measures to reduce the magnitude of native range conversion in priority habitats are needed.

Priority Landscapes: Select portions of range. States include Montana, North Dakota, South Dakota, and Washington. Sage-grouse management zones I, VI (Reference PACS in the COT report)

Strategy: We recommend a three-tiered approach that addresses 1) active support for agricultural policy that removes subsidies for conversion of new lands to tillage agriculture and support farm programs such as State Acres for Wildlife Enhancement (SAFE) and Conservation Reserve Program (CRP), 2) targeting existing easement programs, such as those funded through the NRCS Sage-grouse Initiative, in priority sage-grouse areas where the potential for tillage is greatest, and 3) implementing sustainable prescribed grazing management systems in priority sage-grouse habitats.

Threat Classification

Localized - Substantial

Summary:

Conservation Action	Items	Estimated Cost
Policy - Lobby for conservation measures	Staff time	Redirected resources
Policy - Support for sodsaver	Staff time	Redirected resources
On-the-ground - Targeted delivery of easements	Staff time	Redirected resources
	Easement costs	Redirected resources to determine easement funding need
On-the-ground – Grazing management	Staff time	Redirected resources

Conservation Actions:

Policy:

A. *Lobby for re-attaching conservation measures to federally-funded crop insurance payments (M*)*
   - Conservation measures have not applied to subsidized crop insurance since 1996. Other programs, such as disaster assistance, do require conservation measures.

B. *Provide political support for 'sodsaver' provisions of the Farm Bill (M)*
   - Support the provision that reduces subsidies on newly broken lands, and includes other disincentives to breaking marginal land for tillage agriculture.

On-the-ground:

C. *Target priority sage-grouse habitat with high potential of tillage for conservation easement programs (H)*

- Accelerate existing easement programs (e.g., NRCS, Partners for Fish and Wildlife, state programs) to protect areas with highest threats and/or priorities for sage-grouse conservation.
- Utilize Sage Grouse Initiative tillage risk GIS layer in combination with PACs to target easement investment.

D. *Implement sustainable prescribed grazing management systems in priority sage-grouse habitats (M)*

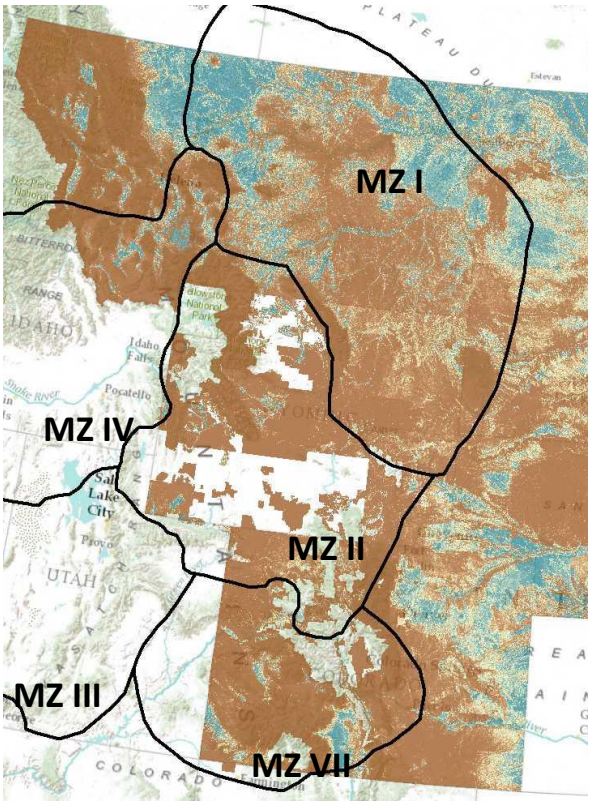
- Viable ranching operations are more likely to be sustained over the long-term, reducing the likelihood of conversion to tillage agriculture or other land use changes.

**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Politics related to the Farm Bill; lack of willing landowners; staff capacity to administer easements.

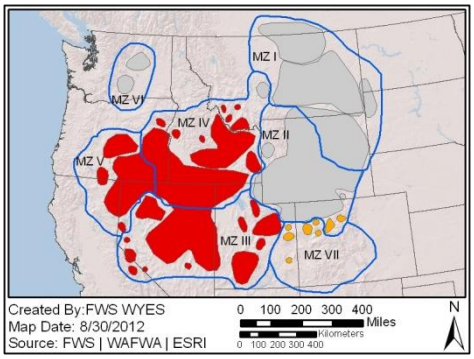
Expected Outcome: Permanent protection of native sagebrush habitat from conversion to tillage agriculture in priority sage-grouse landscapes.

Key Organizations: Governors, Congressional delegates, Livestock Producer groups, Natural Resources Conservation Service, Farm Services Agency, State Wildlife Agencies, FWS, The Nature Conservancy, & Land Trusts.



Conversion of native rangeland to annually-tilled crops, such as wheat in the photo below, is a significant threat in portions of the range. The NRCS Sage Grouse Initiative Tillage Risk Model can be used to target conservation actions in landscapes at high risk of conversion to tillage agriculture (blue-green represents high risk).

Threat: Conifer Encroachment



Purpose & Need: Altered fire regimes have allowed conifers (primarily pinyon pine and juniper) to expand into sagebrush ecosystems reducing available habitat. Existing efforts are beginning to address this issue in the right locations but not at an adequate scale. Action is needed to accelerate treatment and increase scale in key locations across multiple jurisdictions.

Priority Landscapes: Primarily in the western portion of range, but localized in the other management zones and states. This may be the primary concern of Forest Service lands. Primary states include California, Colorado, Idaho, Nevada, Oregon, and Utah. Sage-grouse management zones III, IV, V and VII. (Reference PACS in the COT report).

Strategy: We recommend accelerating targeted efforts to remove early stage conifer encroachment to avert further sagebrush habitat loss and create more suitable habitat. Current estimates suggest that approximately 200,000 acres/year of sagebrush habitats are converting to woodlands. We recommended that treatments match or exceed 200,000 acres/year to maintain or expand available sage-grouse habitat.

Threat Classification

Moderate - Imminent

Summary:

Conservation Action	Items	Total Cost
Expand geospatial conifer mapping to remaining areas in and around PACS. Evaluate rates of conifer expansion. Prioritize areas where the greatest loss of sagebrush is predicted.	Spatial analysis	$250,000
Accelerate conifer removal in early encroachment phase sites I and II.	Mechanical conifer removal on 200,000 acres/yr (~$50-100/ac)	$30-60M
Improving connectivity by selectively treating late encroachment (Phase III) sites.	Mechanical conifer removal on 5,000 acres/yr (~$200/ac)	$3 M
		$33.5-63.15M

Conservation Actions: (listed in order of priority)

E. *Complete GIS mapping efforts to identify extent of conifer encroachment and rates of encroachment within or adjacent to Priority Areas for Conservation (PACS) (H*)*

F. *Accelerate removal of early phase (I & II) conifer encroachment from priority landscapes (H)*
- Utilize hand cutting or mechanical techniques that minimize reductions in sagebrush cover during treatment
- Promote coordination of treatments across jurisdictional boundaries, through state and local planning efforts. For example, align public land treatment priorities with on-going Sage-Grouse Initiative (SGI) treatments on private lands to achieve landscape level effects across land ownerships
- Expedite BLM/USFS NEPA planning processes in key locations where partners are currently seeking treatments across ownership boundaries. Explore all options for deploying additional planning assistance or exercising national policy decisions (e.g., categorical exclusion)

G. *Consider targeted treatments in Phase III woodlands where trees are a known barrier to movement between seasonal habitats (L)*
- Consider this in areas adjacent to prior or planned treatments in Phase I and II.

H. *Support on-going SGI-sponsored research in south-central Oregon examining the effects of juniper removal on sage-grouse demographics and habitat selection.*

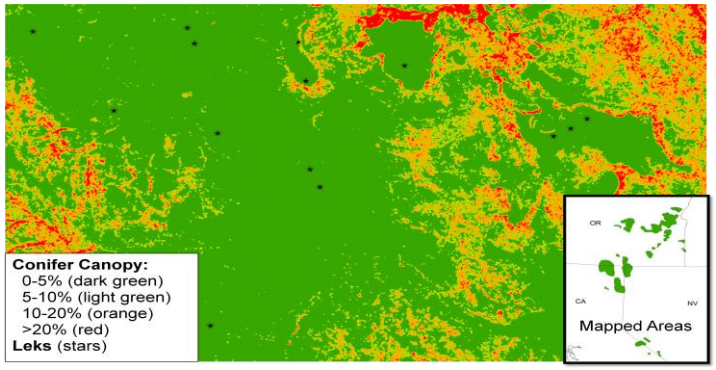
**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Insufficient financial resources to treat at needed scale. Prolonged NEPA process on federal lands, cumbersome restrictions within Wilderness Study Areas and designated Wilderness. Administrative delays (e.g., government processing, contracting)

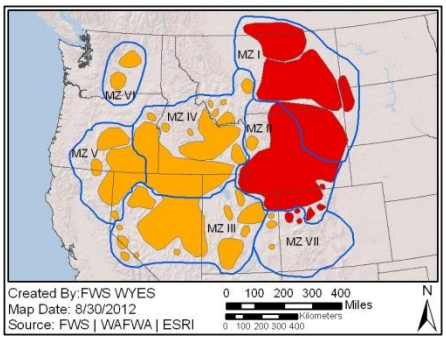
Expected Outcome: Maintain or expand available sagebrush communities allowing birds to continue using existing suitable habitat, re-occupy former habitats, and more readily access seasonal habitats.

Key Organizations: NRCS, BLM, USFS, state agencies

Example of high-resolution (1-m) geospatial conifer mapping developed through the NRCS Sage-Grouse Initiative. Six million acres of priority habitats have been mapped, but remaining PACs need to similar products to better target removal efforts.



Threat: Energy Development



Purpose & Need: Energy development (renewable and nonrenewable) creates large-scale habitat loss and fragmentation. Enforceable regulatory mechanisms are needed to minimize negative impacts to sage-grouse. Examples of current efforts include Wyoming Core Area Strategy and BLM IMs WO 43 & 44.

Priority Landscapes: Range-wide. All sage-grouse management zones, dependent on type of energy development (Reference PACS in the COT report)

Threat Classification

Substantial - Imminent

Strategy: We recommend Governors and appropriate state and federal agencies initiate or continue a leadership role in developing consistent regulatory mechanisms and incentives to conserve priority sage-grouse habitat.

Summary:

Conservation Action	Items	Estimated Cost
Identify priority areas for energy development that intersect sage-grouse habitats	Staff Team: political support	Redirected Resources
Regulatory mechanisms	Staff time; political support	Redirected resources
Consultation with state wildlife agencies	Staff time; political support	Redirected resources
	New &/or redirected staff positions within some state agencies	$1 mil west-wide

Conservation Actions:

Regulatory Mechanisms:

I. *Encourage leadership from the Governor's Office in all states to further develop and implement effective regulatory mechanisms to curtail habitat loss in priority sage-grouse habitat (H*)*
   - For example, work with BLM planning process to ensure consistent conservation mechanisms across all land ownerships.

J. *Where current regulatory authority is lacking, encourage consultation with state wildlife agencies to minimize impacts from development (H)*
   - Work with Industry representatives and private landowners to identify and implement good conservation practices during development, operation, and decommissioning of facilities.

K. *Encourage leadership from the Secretary of Interior's Office to further develop and implement effective regulatory mechanisms to curtail habitat loss in priority sage-grouse habitat (H)*
   - Unitization (oil/gas) - Allow/require unitization within sage-grouse habitat to incorporate appropriate sage-grouse protective measures and considerations in developing the unit plan of development.

- Consolidation of leases - Federal agencies would allow a leasee to consolidate small leases into one lease, thereby reducing the pressure to develop the smaller leases.
- Planning - Develop incentives for companies that plan ahead 5 or 10 years.
- Co-location (oil/gas) - Develop a process that allows different leasees to co-locate development on federal land.
- APD (permit to drill oil/gas) - Develop a process where federal agencies can deny an APD, with compensation to the leasee, for SG purposes.

**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

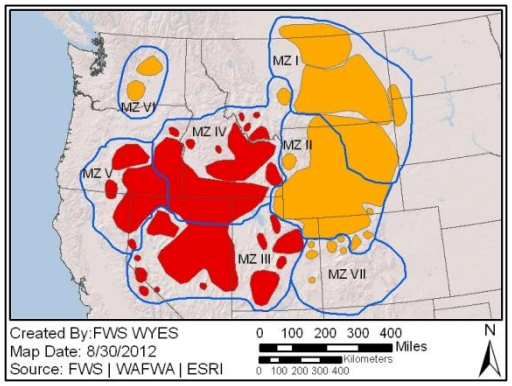
Potential Barriers to Rapid Implementation: Agency culture; political support; time required to work through regulatory process.

Expected Outcome: Enforceable regulatory mechanisms will reduce habitat fragmentation and loss from energy development.

Key Organizations: Governors, state wildlife agencies, state and local regulatory agencies, FWS, BLM, and USFS.

Gas Field Development

Threat: Exotic Annual Grasses



Purpose & Need: Exotic annual grasses continue to create large-scale habitat loss and fragmentation (quality and quantity) and fuel the wildfire cycle. Existing efforts have not been sufficient. Action is needed to focus the right treatments in the right places, coordinate implementation among agencies, increase scale of efforts, and increase the likelihood of treatment success.

Priority Landscapes: Western portion of range. States include California, Idaho, Nevada, Oregon, Utah, and Washington. Sage-grouse management zones III, IV, V and VI. (Reference Priority Areas for Conservation (PACs) in the COT report). However, exotic annual grasses are an emerging issue in all sagebrush habitats.

Threat Classification

Substantial - Imminent

Strategy: We recommend a triage approach to addressing exotic annual grasses that focuses on preventing further conversion of intact sagebrush habitats to annual grasslands. Actions needed include implementation of land management practices that enhance resiliency of native rangelands and containment of existing annual grass dominated areas. Restoration of previously-converted annual grasslands is considered a low priority for conservation action but a high priority for research investment to improve the likelihood of treatment success in the future.

Summary:

Conservation Action	Items	Timeframe	Estimated Cost
Prevent conversion to annual grasses	Gather existing spatial data and conduct analyses to identify intact landscapes at high risk of conversion	Fall 2012	$10,000, Redirected staff
	Implement appropriate land management actions (e.g., improved grazing systems, weed control) designed to enhance perennial grass health and density	2013-2015	$40-80M
Accelerate research	Prioritize and allocate funding to expedite on-going research and development of effective prevention, control, and restoration methods.	Fall 2012 – Spring 2013	$5M
Contain existing annual grass dominated areas	Gather existing data, or conduct new spatial analyses, to identify significant annual grass infestations in relation to PACs	Summer 2013	$20,000, Redirected staff
	Implement appropriate land management	Spring 2014	$10M

Conservation Action	Items	Timeframe	Estimated Cost
	actions (e.g., green-stripping, weed control, seeding, improved grazing management) designed to limit the expansion of annual grass dominated sites		
		Total =	$55-95M

Conservation Actions:

L. *Prevent further loss of intact sagebrush communities to annual grasses (M*)*
- Utilize existing geospatial models (e.g., BLM Cheatgrass Risk Model) combined with local knowledge to identify intact landscapes at highest risk of conversion
- Implement appropriate land management actions (e.g., improved grazing systems, weed control) designed to enhance perennial grass health and density thereby improving the resiliency of native rangelands
- Eradicate small annual grass patches (e.g. using imazapic or glysophate) located in or adjacent to intact habitats and stabilize sites with perennial plants

M. *Accelerate research to improve effectiveness of prevention, control, and restoration actions (M)*
- Prioritize and allocate funding that accelerates research on annual grass prevention and control techniques and improves likelihood of seeding success when restoring invaded sites

N. *Contain existing annual grass dominated areas (L)*
- Map significant areas of existing annual grass dominance in relation to PACs.
  Implement appropriate land management actions (e.g., green-stripping, weed control, seeding) designed to limit the expansion of annual grass dominated sites.

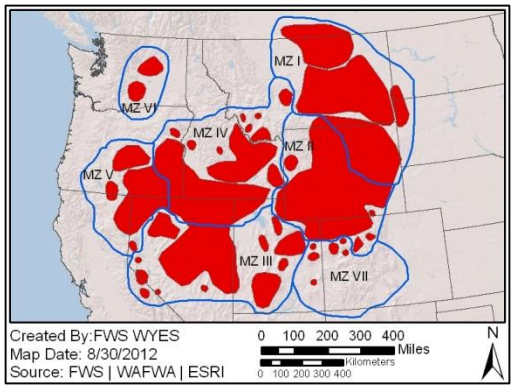
**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Insufficient financial resources given the scale of the problem; Timeframe implementing changes through NEPA; difficult to make grazing changes on public lands, or react quickly for restoration; lack of successful control and restoration techniques; constraints within Wilderness Study Areas and Wilderness Areas.

Expected Outcome: Maintain existing intact sage-grouse habitat; slow the rate of habitat loss due to large-scale conversions to annual grasses. Reduce wildfire risk and increase sagebrush habitat health.

Key Organizations: Federal land management agencies, state agencies, cooperative weed management associations, universities, tribes, Agricultural Research Service - Eastern Oregon Agricultural Research Center.

Threat: Infrastructure



Purpose & Need: Infrastructure (roads, transmission, pipelines, and fences) creates habitat loss and fragmentation and facilitates expansion of exotic annual grasses, synanthropic predators and human activity. Enforceable regulatory mechanisms are needed to minimize negative impacts to sage-grouse. Examples of current efforts include Wyoming Core Area Strategy and BLM IMs WO 43 & 44.

Priority Landscapes: Range-wide. All sage-grouse management zones. (Reference PACS in the COT report)

Strategy: We recommend Governors and all appropriate state and federal agencies initiate or continue a leadership role in developing consistent regulatory mechanisms and incentives to conserve priority sage-grouse habitat.

Threat Classification

Substantial - Imminent

Summary:

Conservation Action	Items	Estimated Cost
Identify infrastructure human footprint relative existing and potential developments and sage-grouse habitats	Staff time, political support	Redirected Resources
Regulatory mechanisms	Staff time; political support	Redirected resources
Consultation with state wildlife agencies	Staff time; political support	Redirected resources
	New and/or redirected staff positions within some state agencies	$100K/position
Identify areas where infrastructure development can be unitized to reduce the overall human footprint (e.g. transmission line corridors)	Staff time, political support	Redirected resources

Conservation Actions:

0. *Encourage leadership from the Governor's Office and all appropriate state and federal agencies further develop and implement effective regulatory mechanisms to curtail habitat loss, fragmentation and disturbance in priority sage-grouse habitat (H*)*
    - For example, work with federal agencies and state siting authorities to make mechanisms consistent across all land ownerships.

P. *Where regulatory authority does not apply or is lacking, consult with state wildlife agencies to minimize impacts from development (H)*
   - Work with Industry representatives and private landowners to identify and implement effective conservation practices during development, operation, and decommissioning of facilities (e.g. transmission retrofitting, burying, road decommissioning, fence marking)

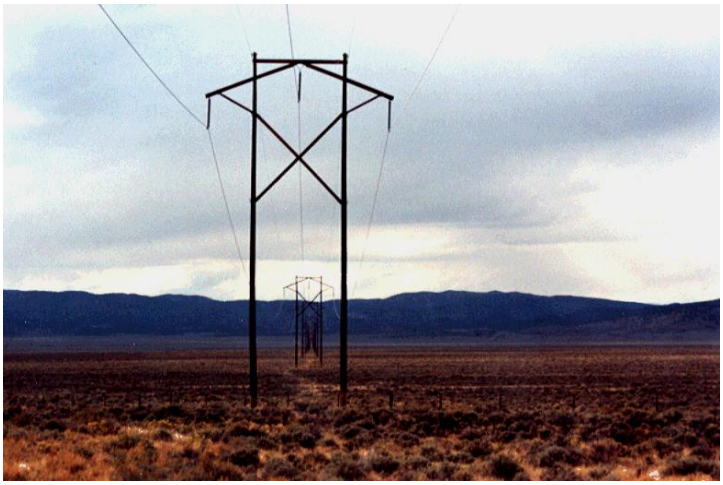
**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Agency culture; political support; time required to work through regulatory processes.

Expected Outcome: Enforceable regulatory mechanisms will reduce habitat loss, fragmentation and disturbance due to infrastructure development.

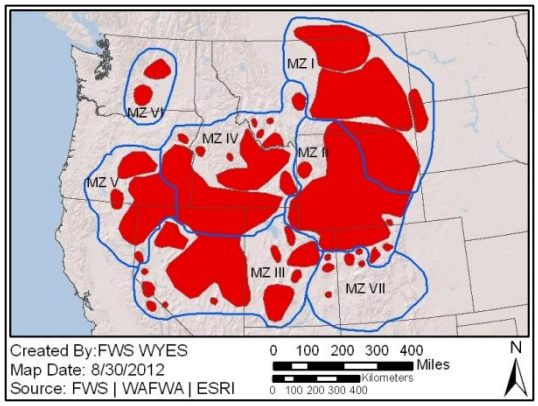
Key Organizations: Governors, state wildlife agencies, state and local regulatory agencies, FWS, BLM, USFS

Vehicle Access to an energy development site.



Powerlines -- Tall structures.

Threat: Maintenance of long-term conservation efforts in the sage/steppe ecosystem.



Purpose & Need: The need for a Federal law was introduced in the Greater Sage-grouse Comprehensive Conservation Strategy. The primary objectives of the legislation are coordination, science, data integrity, and funding. Sage-grouse conservation is an important part of the need for the legislation; however, the sagebrush ecosystem is at considerable risk and a large number of species that are now at risk could benefit from the Act. Sagebrush ecosystems are characterized by very slow responses and conservation actions must be sustained over the long-term.

Priority Landscapes: Range-wide (Reference PACS in the COT report)

Threat Classification

Substantial - Imminent

Strategy: The legislation is coined the North American Sagebrush Ecosystem Conservation Act (NASECA) and is modeled after the highly successful and effective North American Wetland Conservation Act (NAWCA). The authors of the Strategy determined that NASECA was the most effective way to fund conservation activities, maintain data and conservation momentum.

Summary:

Conservation Action	Items	Estimated Cost
Develop draft legislation	NASECA draft developed by WGA and WAFWA	Completed
Enlist a congressional sponsor(s) to introduce the bill	Redraft the bill.	Staff redirection
	Introduce the legislation	Staff redirection

Conservation Actions:

Q. *Develop a draft of the bill with support from the Western Governors' Association and Western Wildlife agencies.(H*)*
- In 2010 WGA and WAFWA completed a draft of NASECA. The draft was submitted to the WGA and Senator Bennett from Utah agreed to sponsor the legislation. Before his office was able to work on the bill, Senator Bennett was defeated and no further action was taken.

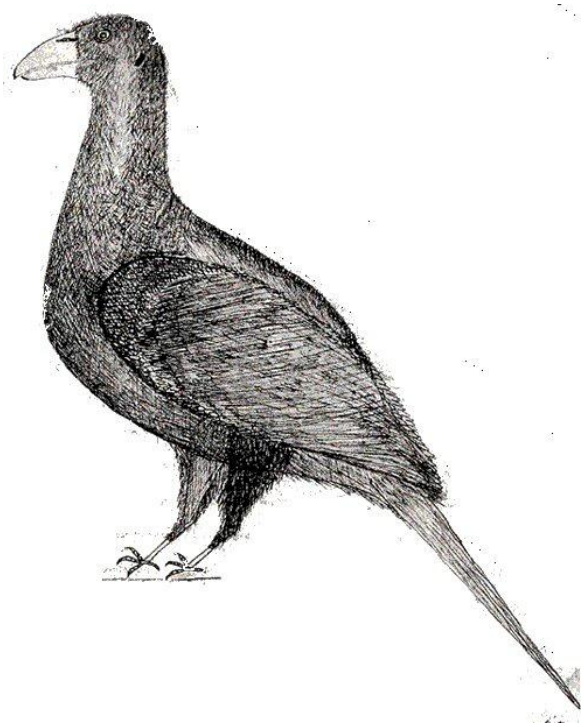
R. *Western Governors have the opportunity to place this bill draft in the hands of their Congressional representatives and move the legislation to Washington (H)*

**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Insufficient political support at the state or congressional level to move the legislation forward.

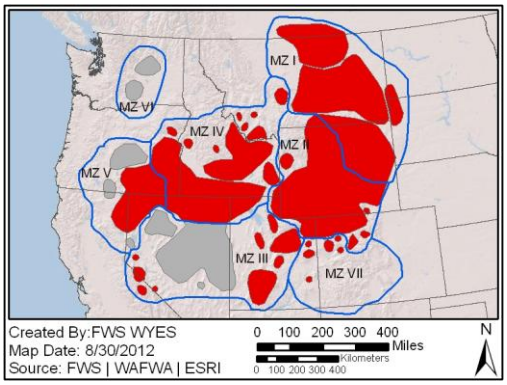
Expected Outcome: A sustained conservation effort in the sagebrush ecosystem demonstrating to the FWS a long-term commitment to threats amelioration. Multiple species of concern would benefit from the conservation efforts. Continuity of conservation programs would be expected with consistent funding, and program oversight. Coordination between agencies, NGOs, Industry and the public would be realized.

Key Organizations: Governors and Congress



Capt. William Clark's 1806 illustration of a sage-grouse

Threat: Urbanization



Purpose & Need: Urbanization continues to cause permanent habitat loss, habitat degradation, and fragmentation. Urbanization also results in impacts from associated features (e.g., roads, fencing, powerlines, and increased human activity) and facilitates increases in predators and introduction of exotic annual grasses. Action is needed to protect habitats and limit further expansion of urban development into priority sagebrush habitat. Existing regulatory mechanisms have not been sufficient to address this threat.

Priority Landscapes: Range-wide but localized. Sage-grouse management zones I, II, III, IV, VII, and Bi-State. (Reference PACS in the COT report)

Threat Classification

Moderate - Imminent

Strategy: We recommend that affected areas develop or strengthen planning, incentive-based, and regulatory mechanisms to limit expansion of urban development into priority habitats.

Summary:

Conservation Action	Items	Estimated Cost
Regulatory mechanisms	Political support	Redirected Resources
Conservation Easements and/or fee title acquisitions	Funding, political support, landowner support	Redirected Resources
Local Planning Efforts (City/County Land Use Plans)	Political Support	Redirected Resources

Conservation Actions:

S. *Encourage leadership from the Governor's Office in all states to engage local governments to encourage effective planning regulatory mechanisms and incentives to avoid important or priority sage-grouse habitats. (H*)*
   - Incorporate sage-grouse habitat conservation into land-use planning decisions, by working with county planners and commissioners to develop and modify land use and zoning plans.
   - Provide updated Greater Sage-Grouse GIS layers to county governments, as data become available.
   - Identify priority areas, for potential conservation actions (e.g., conservation easements, leases, Farm Bill programs, land exchanges, acquisition), and share this information with interested stakeholders.

T. *Conservation easements and fee title acquisition to protect habitat for the long-term. Maintaining sustainable rural economies (where traditional land uses are compatible with sage-grouse and profitable) can significantly reduce impacts associated with urban development. (H)*

**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Insufficient political and financial support at the county and/or municipal level. Inconsistent implementation and enforcement of existing measures. Lack of zoning and land use planning regulations.

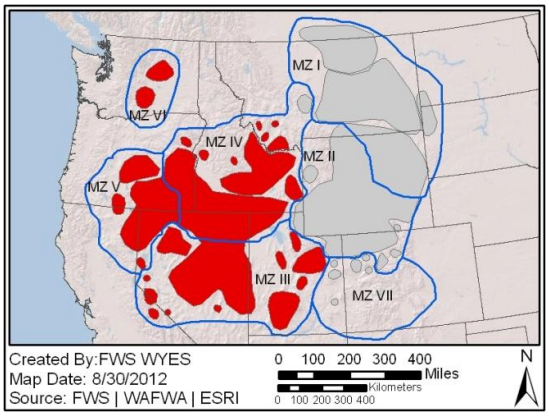
Expected Outcome: Reduced rate of urbanization in sagebrush habitats. Maintenance of quality sagebrush habitats resulting in the stabilization of sage-grouse populations.

Key Organizations: State and local governments.

Bargerville subdivision, Wyoming. Photo credit Tom Christiansen

Threat: Wildfire

Purpose & Need: Wildfires continue to create large-scale habitat loss and fragmentation. Existing efforts have not been sufficient to conserve the most critical habitats. Action is needed to improve pre-suppression, suppression and restoration capabilities. Coordinate implementation among agencies, and increase scale of efforts.



Priority Landscapes: Western portion of range. States included California, Idaho, Nevada, Oregon, Utah, and Washington. Sage-grouse management zones III, IV, V and VI. (Reference PACS in the COT report)

Threat Classification

Substantial - Imminent

Strategy: We recommend a multi-tiered approach to preventing fire, reducing fire size, and/or restoring sites affected by fire on western rangelands that are prone to an accelerated fire cycle and type replacement of sagebrush by exotic annual grasses and other invasive species. These conservation actions work in tandem with the exotic annual grass conservation actions to reduce fire.

Summary:

Conservation Action	Items	Estimated Cost
Fire suppression strategy	Identify a process to identify fire vulnerable sagebrush habitats and spatially delineate these habitats.	Redirected staff time.
	Engage fire behavior experts to provide a fire fighting plan to inform Conservation Action;	$50,000 est.
	Identify strategic locations for fire lines for Conservation.	Redirected staff time.
High Capacity, First Strike Aerial Asset	Assign one or more aircraft with fire detection equipment and high capacity retardant payloads to the primary fire regions.	Unknown
	Launch aircraft in "red flag" conditions so they can detect targets at ignition and attempt to extinguish before the fires have a chance to propagate.	Unknown
Proactively establish defensible fire lines	Identify, through the Fire Suppression Strategy, locations that may increase fire fighters chances of containing fires.	Fire planning, redirected staff time.
	Use green-stripping, brown-stripping	$10 – 20K /mile.

Conservation Action	Items	Estimated Cost
	(removing fuels in linear patterns) or other techniques that provide fire lines.	Mileage dependent upon strategy
Pre-deploy fire-fighting resources	Strategically deploy fire-fighting assets including fire-fighters and equipment	Redirected staff time.
Accelerate efforts to improve restoration capabilities	Increase seed production and storage.	

Conservation Actions:

U. *Develop and implement a tactical fire suppression attack strategy (U*)*
- The plan will identify the most critical sagebrush habitats that must be protected.
- The plan will model fire path behavior so suppression responders can rapidly assess fire starts and locations for effective suppression.
- The plan will provide managers with maps that will model fire paths that may be used to create effective fire lines.
- Increase aircraft resources to be able to successfully fight wildfire.

V. *Strategically station high capacity, rapid response aerial assets to the theater (U)*
- Launch the aircraft during red flag conditions and monitor fire starts. The aircraft should make preemptive strikes on fire starts.

W. *Proactively establish defensible fire lines. (U)*
- Establish green-stripping, brown stripping or other techniques, at the interface of monotypic cheatgrass landscapes and relatively intact sagebrush communities, which will provide firefighters with geographical, topographical, vegetation, or other features to increase success to reduce fire size and protect sagebrush habitats.

X. *Pre-deploy fire fighting resources for rapid and increased suppression efforts. (M)*

Y. *Increase resource availability to conduct restoration activities that have improved potential for success.(M)*

- Increase seed availability and improve storage capabilities;
- Provide support for on-going research for precision restoration and seed coating technologies, such as that being conducted by ARS-EOARC and TNC, in order to improve seeding success rates post-fire.

**Likelihood of action producing desired outcomes based upon best professional judgment and available science. H = High, M = Moderate, L = Low, U = Unknown.*

Potential Barriers to Rapid Implementation: Insufficient human capital and financial resources; NEPA. Inability to use certain tools within Wilderness Study Areas and designated Wilderness to both combat fire and to restore landscapes post fire.

Expected Outcome: Smaller fires, fewer fires on the landscape maintaining large and intact priority sagebrush habitats, thereby, stabilizing populations.

Key Organizations: BLM, USFS, Interagency Fire Center, Eastern Oregon Agricultural Research Center, state agencies and The Nature Conservancy.

SUMMARY

Summary

The RISCT evaluated an inclusive array of documented threats to Greater sage-grouse, as identified by the Conservation Strategy and the Service's 2010 status review. The threats were categorized by which are addressable in the short-term and have the potential to affect the listing decision by providing meaningful conservation actions. A number of threats are not addressed in the near-term conservation action plan because the associated conservation actions are unlikely to be effective in the short-term, they were not widespread and therefore more effectively addressed locally, or the threat was not of an immediate nature. The threats that were not addressed are not insignificant and will need to be addressed in the long-term.

Threats were ranked as high, moderate or low priority. The ranking in this report reflect their status for this exercise only – all of the threats identified herein are high priority when considered relative to all the threats facing sage-grouse. For this report, these high priority threats were ranked to inform short-term conservation actions which would be effective in reducing threats to the species prior to the Service's listing status review in 2015. **The ranking presented here should not be used out of context.** Generally, the costs presented here are higher than those identified in the Conservation Strategy; however, we now have better estimate for a number of conservation actions (actual SGI costs, increased fire costs, and expanding exotic annual grass threats) and the change in costs during the previous 6 years. Several of the conservation actions require the redirection of staff time to address the action.

Priority	Conservation Action	Threats Addressed	Focus Areas Affected	Costs
High	Fire suppression strategy	Wildfire	CA, ID, NV, OR, UT & WA	$50,000
	High capacity, first strike aerial asset	Wildfire	CA, ID, NV, OR, UT & WA	Unk.
	Proactively establish defensible fire lines	Wildfire	CA, ID, NV, OR, UT & WA	$10 -20 K/mile
	NASECA	Agricultural Conversion, Conifer Encroachment, Exotic Annual Grasses, Infrastructure, Urbanization	Range-wide	Staff
	Farm Bill policy	Agricultural Conversion	MT, SD, ND, WA	Staff
	Regulatory mechanisms	Energy, Infrastructure, Urbanization	Range-wide	Staff
	Targeted easements	Agricultural Conversion, Urbanization	Ag Conversion: MT, SD, ND, WA; Urbanization – All states	Redirected Resources
	Geospatial conifer mapping	Conifer Encroachment	CA, CO, ID, NV, OR & UT	$250,000
	Accelerate conifer removal	Conifer Encroachment	CA, CO, ID, NV, OR & UT	$30-60 mil
Moderate	Pre-deploy fire-fighting resources	Wildfire	CA, ID, NV, OR, UT & WA	Redirect Resources
	Annual grass management	Annual Exotic Grasses	CA, ID, NV, OR, UT & WA	$40 - 80 mill

Priority	Conservation Action	Threats Addressed	Focus Areas Affected	Costs
	Accelerate research on annual grasses	Annual Exotic Grasses	CA, ID, NV, OR, UT & WA	$5 mill
	Sustainable grazing management	Agricultural Conversion	MT, SD, ND, WA	Redirected Resources
Low	Contain annual grasses	Annual Exotic Grasses	CA, ID, NV, OR, UT & WA	$10+ mil
	Selective treatment of late encroachment	Conifer Encroachment	CA, CO, ID, NV, OR & UT	$3 mil
Research	Effects of juniper removal	Conifer Encroachment	on-going, south-central Oregon and Colorado	
	Effects of grazing management	Agricultural Conversion, Urbanization	on-going, central Montana	

These conservation actions presented in this summary depend upon the active participation by the broad natural resource community. For example, we ask firefighters with increased efforts in the sagebrush ecosystem as well as fire scientists to help plan attack strategies. We ask plant ecologists to help improve seeding success rates post-fire and to develop biological or chemical tools to address exotic annual grasses. We ask for Congressional staffs to support and move legislation forward and Governor's to engage in legislative and executive actions to ameliorate threats. The coordinated interaction and participation of the entire natural resource community is the key to the successful implementation of these conservation actions, and the conservation of sagebrush and sage-grouse.

This report presents the actions necessary to effect a change in the conservation status of the greater sage-grouse. It is not intended to be an exhaustive list of all necessary actions to remove all threats to this species and its habitats, but rather to provide a blueprint for short-term action. Conservation of this species must continue to be a long-term priority as challenges to the bird and associated ecosystems will continue beyond 2015. While implementation of the conservation actions identified in this short-term action plan is essential to achieve the "desirable status" identified by the Task Force, a long-term plan addressing all threats to this species will be a necessary follow-up to ensure the status of greater sage-grouse is never again in question.