AGENDA

Montana Sage Grouse Oversight Team (MSGOT)

November 3, 2017: 1:00 - 2:00 p.m.

Conference Call[1]

Montana Rooms, North and South, DNRC Headquarters, Helena

1:00: Call to Order, John Tubbs, DNRC Director

- Administrative Matters:
  - Approve minutes August 31, 2017 meeting
  - Confirm meeting date: December 15, 2017
  - Approve proposed meeting date: Tuesday, January 30, 2018, 11:00 a.m. – 2:00 p.m.

1:10 - 1:45: Reports and Implementation of Executive Order 12-2015

- Reports from Individual MSGOT Members
- Montana Sage Grouse Habitat Conservation Program
- MSGOT Discussion, if any

1:45 – 2:00: Public Comment

NOTE: Agenda item times are approximate. Actual times may vary by up to one hour. Attendees who may need services or special accommodations should contact Carolyn Sime (406-444-0554 or csime2@mt.gov) at least 5 working days before the meeting.

[1] Some MSGOT members and the public will assemble in the Montana Rooms North and South; some MSGOT members will participate by teleconference.

SAGE GROUSE HABITAT CONSERVATION PROGRAM

EXECUTIVE ORDER 12-2015 CONSISTENCY REVIEW SUMMARY REPORT

Report Period: January 1, 2017 through October 26, 2017

Report Date: 10/26/2017 at 16:55:47

The Sage Grouse Program (Program) compiles statistics to document its performance while reviewing all proposed activities in Greater sage-grouse habitats designated as a Core Area, General Habitat, or a Connectivity Area pursuant to Executive Order 12-2015. Project proponents provide information through the Program web page and the Program reviews information provided. Through the consultation process, the Program reviews the proposed project for consistency with Executive Order 12-2015. The Program provides written documentation of its review to the project proponent, who then submits the Program's letter with their permit application to the respective permitting agency.

Regulatory authority as to whether to issue the permit resides solely with the state permitting agency [or federal agency in the case of projects which require authorization from the U.S. Bureau of Land Management or U.S. Forest Service projects]. The Program does not retain statistics on processing of permit application by state or federal agencies. However, to date, the Program is not aware of any permits that were denied by a permitting agency because of sage grouse. It is the Program's assumes that it would be contacted directly by the permitting agency or the project proponent if the Program's letter gave a permitting agency reason to pause and consider denying the permit due to sage grouse concerns. To date, that has not happened.

Executive Order 12-2015 took effect on January 1, 2015. At that time, the Program offered its first interactive web portal to submit information. The Program upgraded its system and web portal. The new interactive web portal was launched in April, 2017. Legacy projects and the associated data were migrated to the new system so that the database is complete.

The following statistics reflect the number of projects proponents are still working on prior to formally submitting the information to the Program (draft), the actual number of submissions submitted and received through the Program's website portal, and their disposition. This report reflects statistics for the period January 1, 2017 to the close-of-business on October 26, 2017. This period spans the original web portal version 1.0 and the new system launched in April, 2017.

All Projects:

- 121 projects are in draft[1]
- 521 total projects actually submitted for review (includes withdrawn, archived, Core Areas, General Habitats, Connectivity Area, and projects missing data)
  - 9 were withdrawn by proponent[2]
  - 9 were archived[3]
  - 7 returned to proponents for more information[4]
- 496 total active or completed projects[5]
- 13 currently under Program review[6]
- 483 completed reviews; response letters provided and proponent advanced to permitting[7]
- ***483/496 = 97.4% all projects completion rate (withdrawn, archived and returned not included)***[8]

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[1] ***Draft*** means the proponent is still working on the project in the virtual sandbox and has not formally submitted it for Program review. In the Draft stage, proponents can explore options and modify projects prior to initiating the consultation process. The website stores their information, and proponents work at their own pace. The Program does not start the review process until the proponent clicks the "submit" button, which officially enters the information into the system and notifies the program that a new project has been submitted.

[2] ***Withdrawn*** means the proponent withdrew the request for Program review of the project for some reason of their own accord (e.g. changed their mind). The Program can't withdraw a project on a proponent's behalf.

[3] ***Archived*** refers to legacy projects submitted in the old system or stored by the Program for future reference.

[4] ***Returned*** means the Program returned the project to the proponent because it did not have sufficient information to complete the review. Proponents receive an email with information about why their project was returned. Occasionally, project proponents request that the Program return the project after the official submission because the project proponent desires to make a change of their own accord.

[5] ***Active or completed reviews*** is the total number of submitted projects for which Program review has either been requested by a member of the public or completed by the Program.

[6] ***Currently under review*** means the Program has received a submitted project, has all the necessary information, and is still reviewing the project.

[7] ***Completed review*** means the Program has completed its review and provided written documentation (a letter) to the proponent who can then initiate a permit application with the appropriate permitting agency and move forward.

[8] ***Completion rate*** is calculated as number of projects formally submitted for which the Program had complete information and could initiate review divided by the number of projects for which the Program has completed its review, expressed as a percent.

Core Areas:

- 78 - projects in Core Areas
    - 1 withdrawn; 0 archived
    - 0 currently returned to the proponent for more information
- 7 still under Program review
- 70 completed reviews; letters provided and proponent advanced to permitting
- ***70/77 = 90.9% Core Area completion rate (withdrawn, archived and returned not included)***

General Habitat:

- 369 projects in General Habitat
    - 4 withdrawn; 0 – archived
    - 7 currently returned to the proponent for more information
- 6 still under Program review
- 352 completed reviews; letters provided and proponent advanced to permitting
- ***352/358 = 98.3% General Habitat completion rate (withdrawn, archived and returned not included)***

Connectivity Areas:

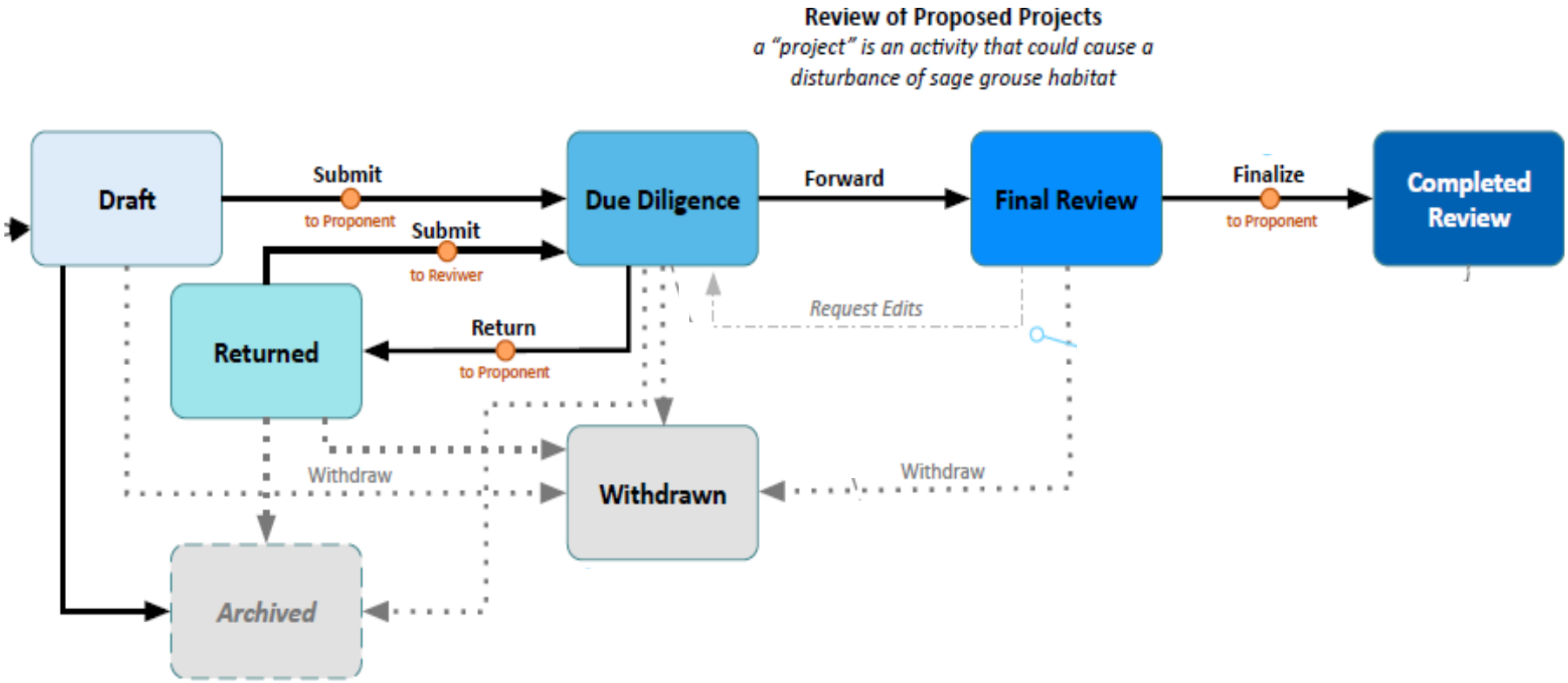
- 1 project in Connectivity Areas
    - 0 withdrawn; 0 – archived
    - 0 currently returned to the proponent for more information
- 0 still under Program review
- 1 completed review; letter provided and proponent advanced to permitting
- ***1/1 = 100% Connectivity Area completion rate (withdrawn, archived and returned not included)***

Other:

All other projects were either outside designated habitats or were submitted without location information for the proposed project. The majority of these were submitted prior to launching the new website.

- 68 outside EO habitat
    - 1 withdrawn; 7 archived because the proponent did not respond to Program requests for complete information
    - 0 currently returned to the proponent for more information
    - 0 still under Program review
    - 60 completed reviews with letters sent
- 5 missing disturbance data (0 in progress, 0 letters sent); proponent did not respond to Program requests for information

SAGE GROUSE HABITAT CONSERVATION PROGRAM
EXECUTIVE ORDER 12-2015 CONSISTENCY REVIEW WORKFLOW PROCESS



INFORMATION REGARDING "CANCELLED" PROJECTS AND ANNUAL REPORT PAGES 21-25

Prepared for the MSGOT meeting on November 3, 2017

The Program prepared the following in response to a request for: (1) clarification of the information on pages 21-25 in the Program's 2016 Annual Report; and (2) information about how many projects were cancelled, approved or disapproved.

Overview and Annual Report Clarification: Pages 21-25 in the 2016 Annual Report provide summary statistics as to the types of proposed projects reviewed by the Program in areas designated as a core area, general habitat, or a connectivity area under Executive Order 12-2015 and Executive Order 21-2015.

Executive Order 12-2015 (EO) applies to all Executive Branch state agencies and is mandatory. The EO requires the Sage Grouse Habitat Conservation Program (Program) to review all proposed activities in sage grouse habitats designated as a core area, general habitat, or a connectivity area by the map contained in Executive Order 21-2015 and for which a state permit is required. The executive orders apply to all programs and activities of state government, including permitting, state authorizations, state grant programs, and technical assistance. Valid existing and private property rights are respected.

Montana's approach to sage grouse conservation endeavors to guide development or other state activities by cataloging where proposed projects would occur in sage grouse country and facilitating consideration of potential impacts to sage grouse and their habitats before they occur through a consultation process. The Program works with project proponents to first avoid impacts, minimize impacts, and restore impacted areas. Through the consultation process the Program provides documentation back to the proponent in a letter, recommending actions that would make the proposed activity consistent with the provisions of Executive Order 12-2015. The Program's letter is provided in any application permit package submitted to a state permitting agency.

The Program does not have any regulatory authority to grant or deny a permit. Regulatory authority as to whether to issue the permit resides solely with the state permitting agency [or federal agency in the case of projects which require authorization from the U.S. Bureau of Land Management or U.S. Forest Service projects].

To initiate the consultation process, project proponents provide information through the Program's web site. This provides an orderly, consistent way for the Program to receive and process requests for consultation. The Montana Sage Grouse Habitat Conservation Program 2016 Annual Report (Annual Report) included figures identifying typical projects the Program reviews. Figure 2 portrays the diversity of activities proposed in Montana's sage grouse habitats.

Because Executive Order12-2015 sets forth different provisions for each category of habitat and the Stewardship Act provides complimentary statutory definitions, the Program also tracks the number of projects proposed and reviewed according to habitat classification. Figure 3 shows this information.

Because 2016 was the first year of the state's implementation efforts, the Program kept track of the total number of submissions and whether or not there was complete information provided. This allowed the Program to understand and timely target public outreach needs and information appropriately. This information is also reflected in Figure 3 as the number of projects submitted "Not in EO Area" and "Missing Disturbance Polygon." The majority of projects that were either outside the EO area or were missing disturbance polygon information were submitted in the early months of implementation.

The caption for Figure 3 states that some projects were cancelled. "Cancelled" strictly refers to clerical recordkeeping by the Program and is wholly unrelated to permitting review by regulatory agencies.

More specifically, "cancelled" does not mean that a permitting agency denied a permit because of sage grouse concerns. The term only has relevance within the context of the Program and in part, also reflects a portion of the overall workload of the Program to process requests for review. The term "cancelled" is also a legacy artifact of the original webpage.

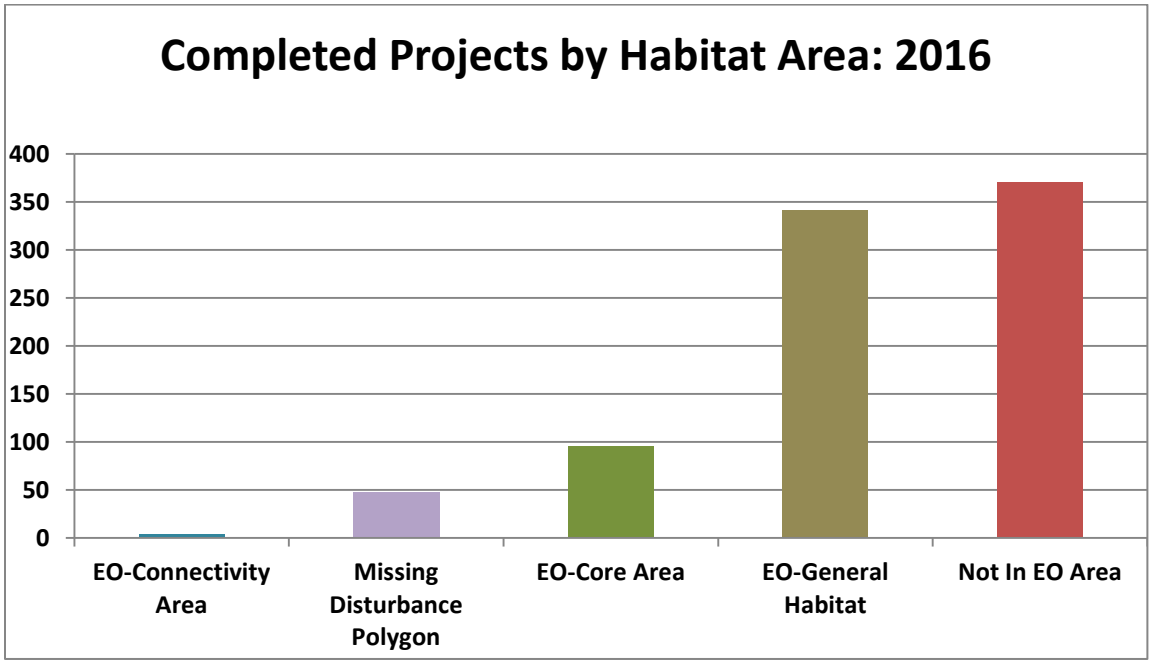


Figure 3. Number of projects submitted for Program review by Executive Order 12-2015 habitat category: Connectivity Area, Core Area, or General Habitat areas. Some submitted projects submitted lacked information about their location (42). Most of these were cancelled either by the proponent or by the Program after consulting with the Proponent. A total of 370 submitted projects were located outside of designated sage grouse habitat, and the Program communicated with 364 proponents by letter immediately and six were cancelled.

Reasons that the Program would record a project as "cancelled" in the Program's own database include: the Program and the proponent confirmed that the proposed activity was outside sage grouse habitat; the project was duplicated in the database; the proponent changed their mind; or the failure of proponents to respond to direct, repeated communications from the Program inquiring as to the disposition of the proposed activity. As noted above, "cancelled" is only associated with the original website and is not a category in the new system.

Page 26 of the Annual Report included a table of Program performance metrics. See below.

Of the 865 projects submitted in 2016, 85 were cancelled. Reasons for this varied, but are addressed above. To reiterate, cancelled projects included projects that were located outside of EO designated habitats. If the proposed activity would take place outside of Executive Order 21-2015 designated areas Program review is not required. The Program notified these proponents that a review was not required and the project was cancelled. The new Sage Grouse web application strongly discourages proponents from submitting a project that is outside of EO designated habitats.

The original Sage Grouse web application allowed proponents to submit a project without spatial data. However, the Program cannot complete a review without knowing where the project is located. In 2016, 37 projects were submitted without spatial data. In all cases, the Program contacted the proponent immediately to complete the review. Three projects were cancelled by the Program due to the proponent never completing their submission by providing spatial data.

In 2016, the Program experienced situations where a project proponent wanted to change or update a project they had previously submitted. On occasions a proponent would resubmit their project as a new project which resulted in the same project being submitted under multiple project numbers. Multiple project submittals were combined and the duplicate project(s) were cancelled. The new Program web application allows proponents or the Program to easily update information without creating a duplicate project.

Additional clarification about "cancelled" projects is provided below on page 4.

Table 1. Summary statistics and Program performance metrics for all project submissions between January 1 and December 31, 2016.

Submission Status – All Projects for 2016	Number of Submissions
Total number of projects submitted	865
Total number of projects that were cancelled	85
Total remaining projects for program review	780
Total number of reviews completed with response letters sent so projects can move forward	768
Final 2016 overall response rate (768 reviews completed /780 reviews submitted)	**98.46%**

Information about how many projects were cancelled, approved or disapproved: The Program compiles statistics to document its performance while reviewing all proposed activities in sage grouse habitat. These are included in the 2016 Annual Report and discussed above. The Program began implementing the consultation and review process on January 1, 2016 through a webpage and process created, and intended to be, of a temporary nature. It was in place through the time period covered by the Annual Report. Transition to a new and improved website in April, 2017 allowed the Program to review and correct errors for legacy or historical data in the database for reporting and database management purposes.

To be clear at the outset, the Program has no authority to grant or deny permits. Regulatory authority as to whether or not to issue the permit resides solely with the permitting agency. As such, whether a permit application is "approved" or "disapproved" rests with the permitting agency.

The Program does not retain statistics on processing of permit applications by state or federal agencies after the Program completes its review and provides a letter to permit applicants. However, to date, the Program is not aware of any permits that were denied by a permitting agency because of sage grouse. It is the Program's assumption that it would be contacted directly by the permitting agency or the project proponent if the Program's letter gave a permitting agency reason to pause and consider denying the permit due to sage grouse concerns. To date, that has not happened.

The term "cancelled" refers to how proposed projects are classified within the Program's database for purposes of tracking our workload and performance metrics. The term's relevance is further limited to projects reviewed by the Program in the original web submission process (legacy or now historical data). The term is no longer relevant to the new system, but remains a carry-over from data stored about projects reviewed during the Program's first 16 months.

Figure 1 below depicts the Program's work flow process in the new system.

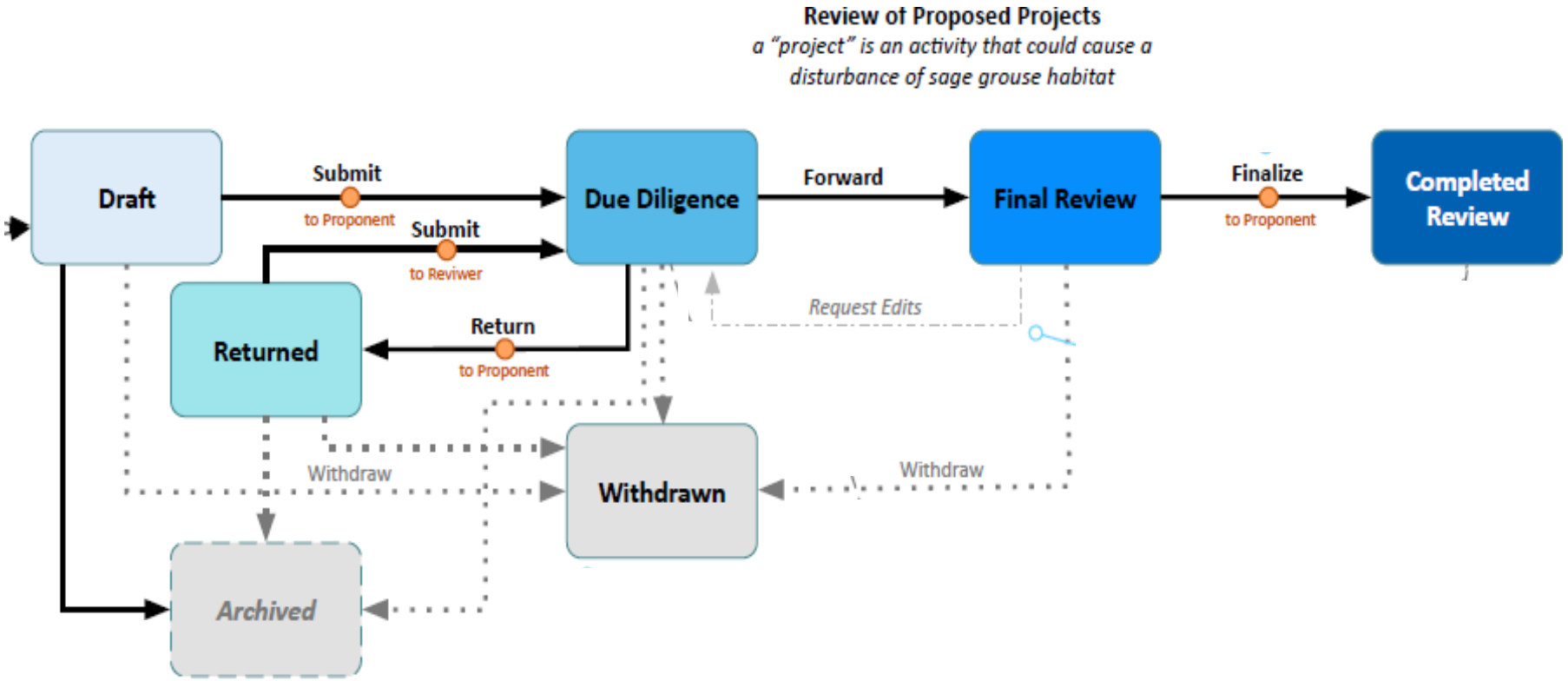
Starting from the left, proponents create their project and answer a few questions about their project in Draft. Proponents can work in a virtual sandbox to change and refine a project at their own pace and over time prior to formally submitting it for review by the Program. Once submitted the Program begins the review process in Due Diligence. When a review is completed and a letter prepared, the consultation letter is forwarded to the Final Review stage. Once completed, consultation letters are sent to the proponent upon completion and the database records the project as Completed Review.

A project can be Withdrawn or Archived by the proponent at any time (previously this stage was referred to as "cancelled"). Proponents make those decisions on their own. The Program may archive a project if the proponent ignores messages that the project is outside of sage grouse habitat and consultation is not required but submits it anyway. The Program would not archive

Lastly, the Program can Return a project to a proponent if it does not have enough information to complete the review. When the proponent updates project information, the project transitions back to Due Diligence and the Program initiates its review.

Both the public and the Program have found that the new system has brought far greater efficiencies to the process.

Figure 1. Sage Grouse Habitat Conservation Program Consistency Review Work Flow Process



INFORMATION REGARDING THE STEWARDSHIP FUND ACCOUNT

Prepared for the MSGOT meeting on November 3, 2017

The Program prepared the following in response to a request for information about the disposition of the Stewardship Fund Account and MSGOT's commitments.

The Stewardship Account was originally created by the 2015 Montana Legislature as a mechanism to encourage voluntary conservation of private lands and to jumpstart a mitigation marketplace by creating the initial pool of mitigation credits that may be used for compensatory mitigation to offset impacts of development in sage grouse habitat. More specifically, the funds in this state special revenue account must be used to "maintain, enhance, restore, expand, or benefit sage grouse habitat and populations for the heritage of Montana and its people." MCA 76-22-109.

With the approval of Governor Bullock, the 2017 Montana Legislature modified the appropriation in HB228. HB 228 transferred $2 million on an annual basis from the state general fund to the Stewardship Account and provided that up to $400,000 of administrative costs in each fiscal year can be paid from the Account.

This means that in state FY 2018 [beginning June 1, 2017], not more than $400,000 can be used to implement Montana's Sage Grouse Program and the remaining $1.6 million is to be used for Stewardship Fund grants. Grants are considered "disbursements from the account to projects approved by the oversight team to receive grants." MCA 76-22-109(3). Therefore, beginning with June 1, 2017, $1.6 million can be disbursed from the Account to complete projects awarded funding by the Montana Sage Grouse Oversight Team (MSGOT).

The following tables summarize MSGOT's commitments and the balance in the Stewardship Account, given the statutory change in HB228. To date, a total of $1,500,000 million has been disbursed from the Account to close the 44 Ranch Conservation Easement. This project closed in November, 2016 (state fiscal year 2016). A total of $2,227,500 has either been obligated against the Account under an executed grant agreement or has been committed by MSGOT through executive action.

Conservation easement projects can take up to three years from initiation to closing, sometimes longer. All future disbursement of funds from the Stewardship Account will be timed in accord with the availability of funds in any given state fiscal year. Efforts would be made to accommodate the grant recipient's request for the month and year for closing the easement.

Funds allocated to the Stewardship Account and that have not been disbursed remain in the state's interest-bearing account to ensure that interest accrues on the balance to the fullest extent possible and for the longest period of time. MSGOT's exact award amount is transferred to the grant recipient's closing agent as an actual disbursement from the Account within one or two days of closing to maximize interest earnings for the state.

Table 1. All grant applications and awarded funding by MSGOT and their status as of October 26, 2017.

Conservation Grant Application Title	Type	County	MSGOT last action	Date	MSGOT Award Amount	Grant Status & MSGOT Funding Commitments	Project Size in Acres
44 Ranch Easement	Easement	Petroleum, Fergus	Approved	5/24/2016	$1,500,000	Easement closed; Funds disbursed	18,033
Raths Easement	Easement	Golden Valley	Approved	5/24/2016	$812,500	Funds obligated in a Grant Agreement	11,229
Watson Easement	Easement	Phillips	Approved	5/24/2016	$162,500	Funds obligated in a Grant Agreement	2,833
Hansen Easement	Easement	Beaverhead	Approved	6/2/2017	$750,000	Grant Agreement in negotiation	13,886
Hansen Conifer Removal	Conifer Encroachment	Beaverhead	Reallocated	6/2/2017	$202,500	Grant Agreement in negotiation	1,100
Weaver Easement	Easement	Cheateau, Blaine	Approved	6/2/2017	$300,000	Completion of Grant Agreement contingent on applicant securing matching funds to complete the project	9,870
Julie Burke Easement	Easement	Phillips, Valley	Withdrawn	11/9/2016			
Kelly Burke Easement	Easement	Valley	Withdrawn	11/9/2016			
NWF Fence Marking Project	Fence Marking	Various (in core)	Withdrawn	11/9/2016			
Smith Easement	Easement	Beaverhead	Withdrawn	6/2/2017			

Table 2. Stewardship Account fund balance, reflecting changes to the statutory authority to disburse funds from the Account for grants, as provided for in HB 228.

State Fiscal Year	Amount Available	Expenditure	Remaining Balance (Running total)
2015 / 2016 Biennium	$2,000,000	$1,500,000	$500,000
FY2017	$1,600,000		$2,100,000
FY2018	$1,600,000		$3,700,000
FY2019	$1,600,000		$5,300,000
FY2020	$1,600,000		$6,900,000

Handout 4

Updated to reflect SB 284,
2017 Legislative Session

Rules

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Statutory Authority

76-22-104. Montana sage grouse oversight team -- rulemaking. The oversight team shall adopt rules to administer the provisions of this part, including:

(1) eligibility and evaluation criteria for grants distributed pursuant to 76-22-110 for projects that maintain, enhance, restore, expand, or benefit sage grouse habitat or populations, including but not limited to requirements for matching funds and in-kind contributions and consideration of the socioeconomic impacts of a proposed project on the local community. The evaluation criteria must give greater priority to proposed projects that:

(a) involve partnerships between public and private entities;

(b) provide matching funds;

(c) use the habitat quantification tool adopted pursuant to subsection (2); and

(d) maximize the amount of credits generated per dollars of funds awarded.

Statutory Authority

(2) the designation of a habitat quantification tool, ~~subject to the approval of the United States fish and wildlife service~~ in consideration of applicable United States fish and wildlife service sage grouse policies, state law, and any rules adopted pursuant to this part;
(3) subject to the provisions of 76-22-105(2), a method to track and maintain the number of credits attributable to projects funded pursuant to this part that are available to a project developer to purchase for compensatory mitigation to offset debits under 76-22-111;

Statutory Authority

(4) methods of compensatory mitigation available under 76-22-111;
(5) review and monitoring of projects funded pursuant to this part;
(6) criteria for the acceptance or rejection of grants, gifts, transfers, bequests, and donations, including interests in real or personal property; and
(7) guidance on management options for any real property conveyed to the state under this part, including its sale or lease.

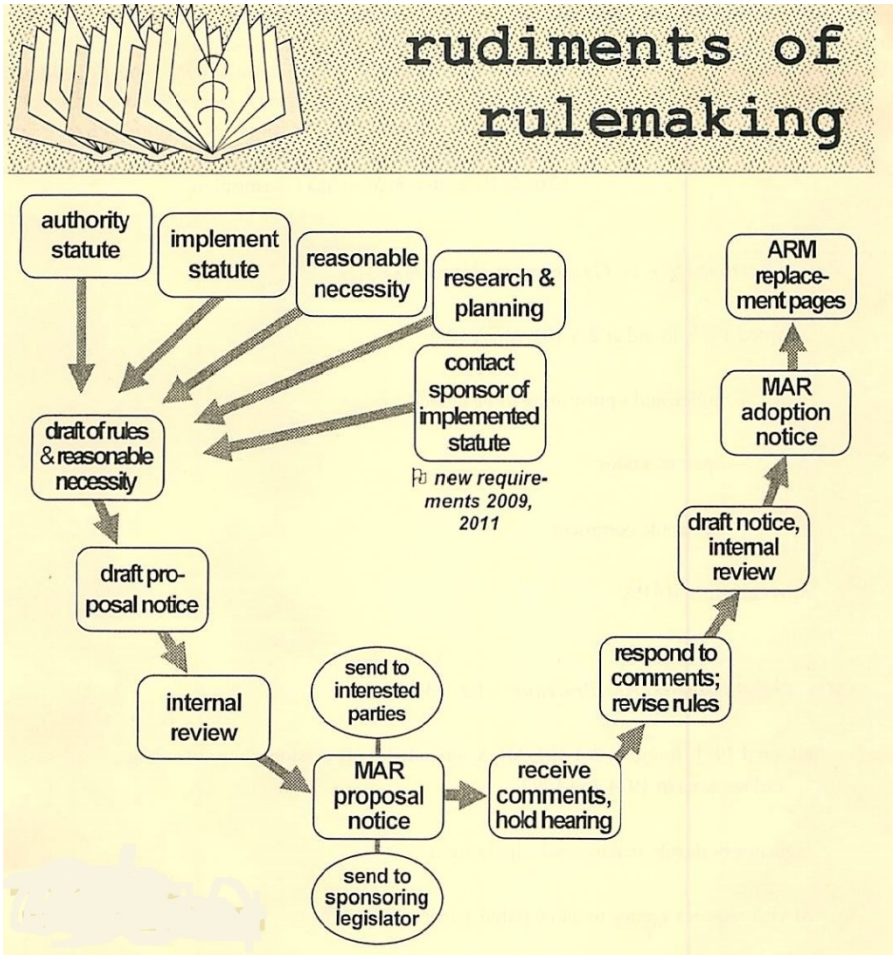
Rule Making Tips

- Every rule must include a citation to a specific grant of authority from the Legislature. 2-4-305, MCA.
- Every rule must be narrowly tailored to fit within the scope of the authority conferred by the legislature. 2-4-305, MCA.
  - "[E]ach substantive rule adopted must be within the scope of authority conferred and in accordance with standards prescribed by other provisions of law."
- Every rule must be preceded by notice and a statement explaining why the proposed rule is reasonably necessary. 2-4-302, MCA.

Rule Making Tips

- Rules may not unnecessarily repeat statutory language. 2-4-305, MCA.
- Rules must be consistent with their delegating statute. 2-4-305, MCA.
- Rules cannot add additional requirements that contradict or go beyond legislative intent. 2-4-302, MCA.
- An agency may use informal conferences and consultations as a means of obtaining the viewpoints and advice of interested person with respect to contemplated rulemaking. 2-4-304.

Rudiments of Rulemaking



Board of Environmental Review Rule-Making

Rule Adoption Notice must be published within 180 days from Proposal Notice publication

180 days

DEQ

Program Files Rule Request; Initial Verification that Authority Exists for Proposal

Legislative Sponsor Notified of Intent to Commence Rulemaking 2-4-302(2)(d)

Senior Management Review for Agency Priority

Legal Review of Rule Proposal and Statements of Reasonable Necessity 2-4-302(1)(a), 305(6)(b) 2-4-110

Develop and Draft a Rule Proposal

Draft Rule Proposal Sent to Governor's Office for Approval

Yes

Draft Does Not Proceed or is Rewritten

Present Rule Proposal to BER to Initiate Rulemaking

Respond to Comments; Modifications Integrated into Rule Adoption Notice 2-4-305(1)

Present Draft Final Rule Adoption Notice to BER

Submit to Federal Agency for Approval Under Federal Acts e.g., SIPs 42 USC 7410 CAA 110

Notify Interested Parties

2-4-302(4) =/> 28 days for comment

Public Involvement

Stakeholder Discussions and Involvement

As Required: WPCAC Review APCAC Review

Stakeholder Discussions to Resolve Issues

Public Hearing

Rule Not Adopted

No

Other Agency

BER Approval to Proceed?

Yes

No

Governor's Office Receives Draft Rule Proposal Notice and Reviews to Go Forward

Proposal Notice Published in MAR by Sec. of State Office 2-4-302,312

30-90 days

BER Adopt?

Yes

No

Rule Becomes Final Min 30 days 2-4-304(2)(c) 6 months to adopt 2-4-305(7)

Sec. of State Publishes Rule in MAR; Becomes Effective 2-4-312(3)

EQC, WPC Receives Draft Rule Proposal Notice, may object, postpone, 2-4-305(9), 306(4) 75-1-324(10), 5-5-231(1)(e) Poll 2-4-403 Econ IS 2-4-405 Publish 2-4-406

October 25, 2017

U.S. House Committee on Natural Resources

"Empowering State-Based Management Solutions for Greater Sage-Grouse Recovery"

Testimony of John Tubbs, State of Montana
Chairman of the Montana Sage Grouse Oversight Team and
Director of Montana Department of Natural Resources

Good morning Chairman Bishop, Ranking Member Grijalva and members of the Committee. My name is John Tubbs and I serve as Chairman of the Montana Sage Grouse Oversight Team and Director of the Montana Department of Natural Resources and Conservation. Thank you for the opportunity to provide Montana's perspectives on how Congress and the Administration can most effectively empower state management for the Greater sage-grouse.

I have three main points today.

First and foremost, states have been and will continue to be empowered best if Congress and the Administration recognize and support the long history of bipartisan, state-led collaboration to conserve Greater sage-grouse across its range in the west. States have served as the primary convener of diverse stakeholders for decades and have been the primary drivers of policy initiatives targeting sage-grouse conservation through executive action and through the Western Association of Fish and Wildlife Agencies and the Western Governors' Association Sage Grouse Task Force. Congress and the Administration should continue to give deference to state leadership and should avoid actions that undermine years of collaborative efforts among our partners.

Second, Congress and the Administration can best empower states by avoiding policy changes that foster uncertainty and hold potential to land sage-grouse on the Endangered Species Act (ESA) list. The conclusion that sage-grouse did not warrant listing in 2015 was predicated on the fact that federal and state land use plans provided the certainty required to demonstrate that threats would be reduced in approximately 90% of the breeding habitat and the majority of occupied range. These regulatory mechanisms did not exist in 2010 when it was determined that listing was warranted. Congress and the Administration should avoid changes that undermine the foundation of the 2015 not warranted finding and must consider how future risk of a listing may disproportionately impact states.

Finally, states can be supported by efforts to adaptively implement land use plans to address changing conditions, use new science and build consistency across ownerships with State conservation strategies. The Administration should use all available tools including the issuance of guidance, instructional memoranda, trainings and other strategies to build consistency. The Administration must exercise due diligence and meaningfully consult with states prior to embarking on costly and time consuming plan amendments that may spark litigation or new petitions for an Endangered Species Act listing. Congress should avoid changes that limit the

flexibility of federal agencies to resolve conflicts when and where they occur under the Federal plans.

1. **States will continue to be empowered if Congress and the Administration recognize and support the long history of states' bipartisan collaboration to conserve Greater Sage-Grouse.**

   Montana has a long history of bipartisan collaboration to conserve Greater Sage-Grouse and their habitats. Montana sportsmen, resource managers, landowners and other conservation interests have been concerned about the status of sage-grouse as far back as the 1950s. Similar concerns across the west crystallized in a formal Memorandum of Understanding signed by Western Association of Fish and Wildlife Member Agencies and federal natural resource management agencies in 2000. Each state committed to convene a work group and craft a plan.

   Montana adopted its first formal Greater Sage-Grouse Management Plan in 2005. It was the product of a diverse working group that included representatives of federal and state agencies, tribal representatives, private organizations, and the public. The Plan charted a path to achieve long-term conservation and enhancement of sagebrush steppe that would support not only sage-grouse, but people and other wildlife. It created local working groups. As importantly, it provided for coordinated management across jurisdictional boundaries and development of community support to balance conservation with social, cultural, and community values.

   New science, coupled with new or expanded potential threats to sage-grouse habitat and populations and litigation prompted Montana to update its original 2005 plan. Early in 2013, following efforts in Wyoming and other states, Governor Bullock issued Executive Order 2-2013 creating a diverse citizen-based advisory council. The council was directed to gather information, furnish advice, and provide recommendations for a state-wide strategy to preclude the need to list the Greater Sage-Grouse under the ESA.

   Private landowners, conservation groups, industry, and state and federal partners worked together intensively for nearly a year. After extensive public comment and meetings around the state, the council finalized their recommendations. Governor Bullock issued Executive Order 10-2014 in 2014 based on their work.

   Recognizing the value of proactive stewardship and conservation, in 2015 the Montana Legislature passed the Greater Sage-Grouse Stewardship Act (Stewardship Act) by an overwhelming bipartisan majority, codifying many of the recommendations of the advisory council. The Legislature created the Montana Sage Grouse Oversight Team, which has met regularly since fall, 2015. Separately, the Montana Legislature appropriated funding to implement Montana's Sage-Grouse Program and encourage voluntary conservation of private lands to address threats. In fact, Montana has committed $10 million towards private land conservation. In partnership with others thus far, Montana will have protected 72,000

acres of private land from the threat of cultivation. Additional conservation measures have been implemented on private lands through Montana Fish, Wildlife & Parks.

Governor Bullock issued Executive Order 12-2015 later in 2015 to address additional program needs. Taken together, Executive Order 12-2015 and the Stewardship Act comprise Montana's Conservation Strategy (or State Plan). Montana's plan aligns closely with Wyoming's plan, only with a greater emphasis on private lands where most of Montana's best sage-grouse habitat occurs.

Montana has nearly 1,000 leks and an estimated 18 percent of the total greater sage-grouse population and nearly 20% of the rangewide habitat; however, about 78 percent of the occupied range is in state, tribal and private landownership. Only 22 percent of the occupied range is federally owned and managed in Montana.

Montana takes an "all lands, all hands" approach to sage-grouse conservation because private lands and state trust lands are intermingled with federal lands in a checkerboard fashion. By working with private landowners, conservation groups, industry, and federal agencies, Montana has found a path forward that conserves working landscapes and that supports sage-grouse, other wildlife, agriculture, economic opportunities for industry, and outdoor recreation.

Diverse stakeholders have been at the table every step of the way in Montana. They lobbied extensively in support of the Stewardship Act in 2015 and continue to be directly engaged with Montana's Sage-Grouse Program on a regular basis. Moreover, they continue to testify before the Montana Legislature and various interim committees to support Montana's sage-grouse conservation efforts to this day. They also express support for how the federal plans and the state plan work together and in concert towards Montana's common, shared goal: maintaining authority to manage our lands, our economy, and our wildlife.

Similar collaborative efforts occurred in other western states, and Governors have led the way. Along with local citizens and federal partners, states have forged a path that balances economic opportunity with conservation. States are committed to maintaining the state and federal conservation efforts developed at the local level, which when taken together, will preclude the need to list sage-grouse under ESA across its range.

Meaningful consultation and coordination between states and the federal government has been a hallmark of this effort. Governors have consistently demanded that the Department of the Interior offer direct and meaningful consultation opportunities given states' track record, the commitments of our partners, and the leadership role and responsibility states have for managing wildlife. Those expectations have been the same, regardless of the Administration.

Given decades of bipartisan work, Congress and the Administration must continue to stand behind and respect state efforts and avoid actions that unnecessarily polarize the collaborative work of our partners. States have consistently requested the Department of the Interior work hand in hand with the Western Governors Sage Grouse Task Force. Only the Governors can speak for whether this consultation is adequate. Future policy actions must be

developed in concert with the states—top down approaches from Washington D.C., whatever their intentions, must not be pursued under the guise of state empowerment.

2. States will continue to be empowered if Congress and the Administration avoid policy changes that foster uncertainty and hold potential to disproportionately impact individual states.

In 2010, the U.S. Fish and Wildlife Service (USFWS or Service) identified habitat loss, fragmentation, and the inadequacy of existing regulatory mechanisms to address threats as the key factors leading to the determination that ESA protections for the Greater Sage-Grouse were warranted. Populations had been in decline for decades and some local populations had been extirpated.[1]

In September of 2015, the Service concluded that the primary threats were ameliorated by conservation efforts implemented by Federal, State, and private landowners. Regulatory mechanisms were adopted in three state plans and in the federal land use plans, incorporating conservation principles identified by the scientific experts to substantially reduce risks through avoidance and minimization measures at a landscape scale.[2] These efforts were complimented by voluntary conservation efforts on private lands by individual landowners, the NRCS Sage Grouse Initiative, and Candidate Conservation Agreements with Assurances.

Along with Wyoming and Oregon, Montana is one of the three states that adopted affirmative regulatory mechanisms that addressed threats to sage-grouse. In contrast, other states adopted primarily voluntary state plans. Federal land use plans filled the gaps across the west through sage-grouse specific provisions and land use allocations. Federal land use plans provided the high degree of certainty required to demonstrate that threats would be reduced across approximately 90% of the breeding habitat and the majority of occupied range because common elements were included across the range which avoided and minimized disturbance in the remaining large priority blocks of habitat, while also providing management flexibility in areas that are less critical for conservation.[3] The federal plans and state plans from Wyoming, Oregon, and Montana provide protective, regulatory mechanisms for the majority of the most important habitat for sage-grouse. All told, the Montana, Wyoming and Oregon plans provide assurances for over 56 million acres of occupied range on state, tribal and privately-owned lands.

The 2015 not warranted finding relies on the foundation of both the state and federal plans. The regulatory nature of state plans from Wyoming, Oregon, and Montana provided the greatest degree of certainty in addressing threats on state and private lands and were complemented by other state plan efforts, and the voluntary work of NRCS with private landowners. The federal plans provided new regulatory mechanisms on over half of the occupied sage-grouse range that did not exist in 2010 when listing was warranted and sage-grouse became a candidate for listing.[4] The new sage-grouse measures and land use

[1] *See* 80 Fed. Reg. 59858, 59870 (Oct. 2, 2015).
[2] See 80 Fed. Reg. 59858, 59874-59882 (Oct. 2, 2015).
[3] *See* 80 Fed. Reg. 59858, 59874-59882, 59928, 59931, 59934 (Oct. 2, 2015).
[4] *See* 80 Fed. Reg. 59858, 59873-59882, 59928 (Oct. 2, 2015).

allocations adequately addressed threats, and through common elements, conserved the most important habitats across the range of the species.[5] All states benefited from the federal plans contributing to habitat conservation and threat abatement in consistent ways across the range, regardless of whether individual state plans were regulatory or voluntary. This is because the Service analyzed the adequacy of habitat conservation measures, threats, and the combined effect of state and federal regulatory mechanisms at a landscape scale and rangewide.

Montana believes there are potential legal issues that could arise from taking a hasty and narrow view towards changing federal plans. First, a thoughtful analysis is needed to identify elements of the federal plans that were necessary to conserve habitat through avoidance and minimization measures in key habitats across the range and that were relied upon by the Service when it concluded that listing was not warranted in 2015. Any changes that would undercut the efficacy of conservation measures to address threats, as measured against the best available science, should give us pause to reconsider. Sage-grouse do not tolerate habitat loss and fragmentation very well, nor are they good pioneers. The science is unambiguous in that regard.

Secondly, the sum of changes within individual states must be analyzed when they are aggregated up to a landscape scale and across the range. If the aggregate of changes undercuts that which is necessary to address threats adequately and sustain sage-grouse into the future, then litigation is not only certain, but a listing is also likely. Here, Montana again stresses the need for due diligence and meaningful consultation prior to moving forward.

Montana is very concerned that potential changes to federal plans may erode the very underpinnings that were critical to achieving conservation rangewide and that was sufficient to avoid a listing in 2015. State plans alone are not, and will not ever be, adequate.

Montana did however identify a number of areas where plans could be improved as part of our Governor's consistency review. To date, those issues have been addressed through administrative arrangements not requiring plan amendment at the state level. Shortsighted, piecemeal changes to federal plans (individually or collectively) would be a step back in time to the days when management was focused on administrative boundaries alone, not natural resources on a landscape scale. Piecemeal changes could impact and fragment larger blocks of known valuable habitat, and as a result, could lead to population declines and eventual listing. Montana would be disproportionately impacted by such a result.

Montana's most valuable sage-grouse habitats occur on private lands. In fact, 66% of Montana's sage-grouse habitat is privately owned. That's 21,582,000 acres. An additional 2.2 million acres of sage-grouse habitat is state trust land. All told, about 75% of Montana's sage-grouse live on private and state trust lands. For generations, Montana ranchers have knit together grazing opportunities on private, state, and federal lands to sustain their families and the integrity of the land.

The impacts to private landowners and Montana's economy if sage-grouse were listed would be severe, in both regulatory and pragmatic ways. Montana's private landowners should not

[5] *See* 80 Fed. Reg. 59858, 59874-59882, 59928, 59931, 59934-59936 (Oct. 2, 2015).

be forced to carry the burden for more than their fair share of the stewardship responsibility to preclude or respond to an ESA listing.

Habitat conservation for sage-grouse translates to habitat for big game. Montana has a deep tradition of hunting on both public and private lands. Big game hunting in Montana contributes $324 million annually to the Montana economy. In counties that contain designated sage-grouse habitats, big game hunters spend over $113.5 million annually when hunting Montana's checkerboard landscape.[6] For these 38 rural counties, hunter expenditures have significant and positive impacts on local economies. Montana's motto of "think habitat" applies equally to sage-grouse and big game. The state recognizes the synergies between sage-grouse conservation, maintaining working ranchlands, and supporting our hunting heritage.

Sagebrush habitats in the west support over 300 other wildlife species, any one of which could be in trouble and heading for the ESA emergency room. We have limited data for most of these species, but are confident that addressing threats to sage-grouse through habitat conservation will take care of them, too.

Congress and this Administration can empower states by fully funding federal agencies to implement their missions and respective land management plans. The existing federal plans account for the complexity of managing millions of acres at a landscape scale and endeavor to balance multiple use mandates with conservation. This work is expensive, but critical to sustaining future energy development and outdoor recreation over the long haul. Farm Bill conservation programs remain critical to sage-grouse conservation on working lands and must continue to receive adequate funding.

3. States can be supported by efforts to adaptively implement land use plans to address changing conditions, use the best available science and build consistency across ownerships with state conservation strategies.

In July of 2015, Montana voiced a number of concerns regarding potential issues with the BLM sage-grouse plans in our Governor's consistency review letter. We continue to see the need for improvement and consistency in some areas. However, we have also learned a lot in the first two years of implementing the state and federal plans. Many issues flagged at the outset in 2015 have either not materialized or have not proven to be insurmountable. We have found ways to address them administratively and expect to find new ways in the future.

For example, Montana BLM now implements Montana's disturbance cap threshold of 5%. This has been or soon will be institutionalized through a new Instructional Memorandum from the BLM State Office. The state and Montana BLM now take the same analytic approach to range improvement projects. Going even further, conversations have already begun in Montana about increasing training and collaboration between BLM and livestock producers. This would ensure consistent and effective implementation of the plans while also providing needed flexibility for local managers to implement science-based management

[6] Montana Fish, Wildlife & Parks (2016); *see* https: https://mtfwp.maps.arcgis.com/apps/Cascade/index.html?appid=0fa1de4222074cdeb7dbf0710ecb2ee0.

at the local site scale in an ecologically meaningful way that's appropriate for Montana habitats. It also provides certainty for ranching families. Federal land use plans were always expected to evolve based on changing needs and circumstances. We have already seen that in Montana, and we will continue to adapt and resolve issues locally in the future. A commitment to flexibly address conflicts when and where they occur is a cornerstone of Montana's Greater Sage-Grouse Plan and has proven to be a tenant that has been supported by our federal agency partners.

Nonetheless, there are areas where alignment could still be improved. But it is equally important that we analyze and exhaust the full range of administrative tools to address inconsistencies and resolve conflicts before resorting to lengthy, costly plan amendments under NEPA. Once more, it is equally important that we ensure that any new proposed changes to the federal sage-grouse plans not create further inconsistencies with state policy. Top down policy from Washington DC holds potential to further exacerbate the inconsistencies with state and federal efforts rather than resolve them.

Montana believes the most efficient approach to address concerns is to look at the full spectrum of tools, ranging from public outreach to staff training, instructional memoranda at the national and state levels, and maintenance actions to existing plans. In short, we can best move forward by refining the existing plans. It is imperative that we avoid prolonged and unnecessary work that would unravel the foundation of the 2015 "not warranted" finding to the point that we all risk a result we worked so hard to avoid. Adaptive implementation of the plans can reduce uncertainty for our partners, industry, and working ranch families who take care of the land and the wildlife on our behalf and can help address inconsistencies efficiently. While properly vetted, limited plan amendments may be needed to address concerns over time, Montana believes most conflicts can be addressed in the near term through other means.

Thank you for the opportunity to share Montana's perspective. We look forward to continuing our work with Congress and the Administration to improve certainty, address inconsistencies with state policy through adaptive actions, and support the collaboration among diverse partners that resulted in the 2015 not warranted finding.

Science to Solutions

Sage Grouse Need Intact Landscapes For Long-Distance Movement

In Brief: Two new studies revealed unknown long-distance dispersal and migration movements in sage grouse that offer fresh insights for conservation. Using DNA from feathers dropped at leks, scientists discovered that some grouse (about 1% of populations) travel long distances to explore breeding areas up to 120 miles away—movements that can potentially boost populations and temper inbreeding. A separate satellite-telemetry study of sage grouse that migrate between Saskatchewan and Montana found that this population migrates annually up to 150 miles round-trip between seasonal ranges. During migration, grouse use pathways through intact habitat and rest and refuel at stopover sites. Taken together, these findings underscore the need to conserve intact sagebrush habitats across large landscapes on both public and private lands to sustain sage grouse movement pathways, their populations, and genetic diversity.

DNA and Satellites Reveal Unexpected Journeys

Innovative research techniques can shed new light on animal behavior and ecology, as well as supplement conventional knowledge about a species. Two recent studies took a fresh look at movements of sage grouse—a bird that returns faithfully to leks to breed in spring and is typically considered a home-body, moving short distances as necessary between seasonal ranges.

The first study examined dispersal movements of sage grouse between breeding sites, finding that about 1% of a population has a travel itch—rather than stay at known leks, they will disperse surprisingly long distances to new lek sites. The second study looked at the seasonal movement patterns of a population that migrates much farther than any grouse species known, making a 150-mile round-trip journey between breeding areas in Canada and winter range in the US.

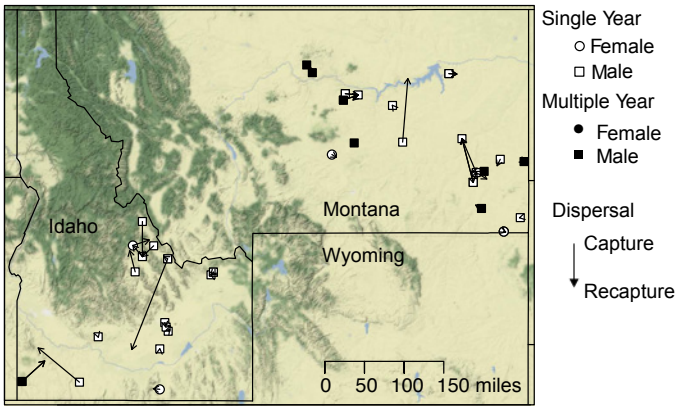
Using feather DNA and satellite telemetry, scientists recently discovered record-breaking long-distance movements by greater sage-grouse. Photos by John C. Carlson.

Tell-Tale Feathers

Researchers have long known that tracking animals by telemetry often misses and underestimates long-distance dispersal. To overcome this problem, Todd Cross, an SGI researcher affiliated with the U.S. Forest Service Rocky Mountain Research Station, used a non-invasive molecular technique to track sage grouse movements among leks. Rather than capture and radio-tag individual grouse, Cross extracted DNA from feathers collected at leks to identify and "recapture" individual birds. Between 2007 and 2013, surveyors conducting annual lek counts collected more than 7,600 fallen grouse feathers from 835 leks in Idaho, Montana, North Dakota and South Dakota. Cross and his colleagues then genotyped the feather DNA and successfully identified 3,212 individual grouse.

Among the thousands of individuals identified, 78 (about 2.5%) popped up twice in the samples and were "recaptured" either at the same or at different leks. Of these, 39 grouse were recaptured on the same lek, illustrating the breeding site fidelity (called *philopatry*) typical of sage grouse. Yet in 41 genetic recaptures, birds shifted to different leks. Seven of these birds journeyed more than 30 miles away, six within the same breeding season, and one recapture was as far as 120 miles away during the same spring.

Dispersal is a genetic mixer. On the one hand, if birds stick to the same breeding sites, they have the advantage of knowing their competitors as well as the local landscape. This knowledge can boost survival and mating success, but there is also a risk of genetic isolation and inbreeding.

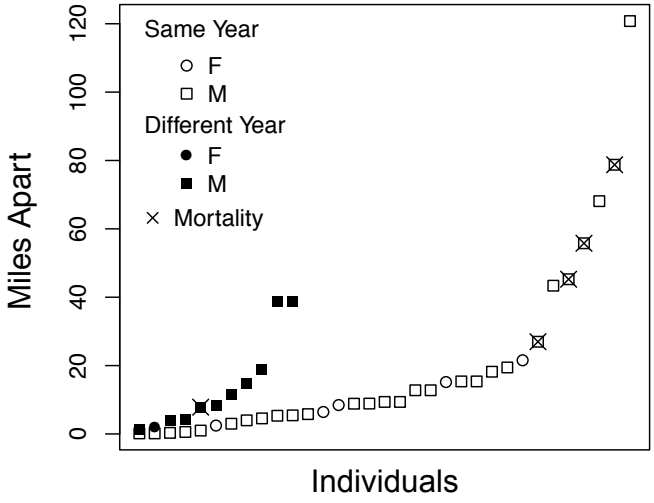


Breeding dispersal movements of sage grouse observed within a single year or over multiple years among leks in Idaho, Montana, North Dakota, and South Dakota (2007-2013). Arrows show the direction of dispersal between leks where individuals were genetically captured and recaptured. Map courtesy of Todd Cross.

Dispersal vs. Migration

Dispersal is a one-way ticket: individuals move from their birth site to a breeding site (natal dispersal) or from one breeding site to another (breeding dispersal).

Migration is a round-trip journey: animals move from one region to another between seasons. Some sage grouse are non-migratory; some migrate between winter range and breeding areas (called 1-stage migration); and some migrate between winter, breeding, and summer brood-rearing ranges (2-stage migration).



Distance individual birds dispersed between genetic capture and recapture on leks in Idaho, Montana, North Dakota, and South Dakota (2007–2013). While most recaptures showed movements of <20 miles, several individuals dispersed >30 miles between leks.

Male and female sage grouse. Photo by Ken Miracle.

Males and females may seek new opportunities to breed if they haven't had good luck at known leks, or are looking to increase their mating chances elsewhere. Survival for dispersers can be slim—and the chance of breeding even less—but it's a risk worth taking if birds breed successfully. Ultimately, birds mix their genes across the larger population, which reduces inbreeding, increases genetic variation, and helps keep populations healthy. Even one individual in a generation can stem genetic isolation. The birds don't know this, of course, but something in a few individuals drives them to strike out for parts unknown.

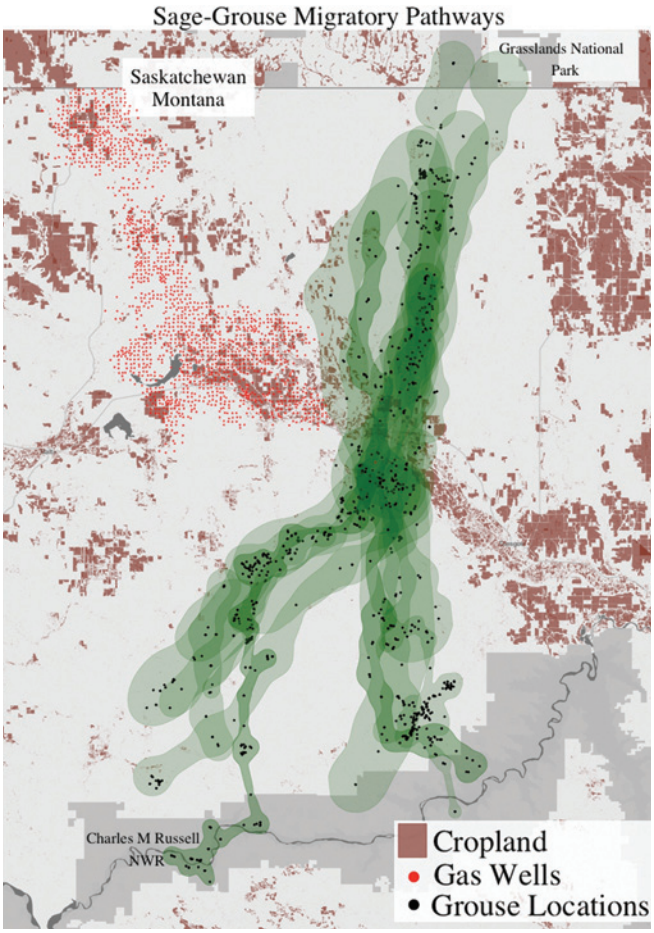
Migration Pathways and Stepping Stones

In southern Saskatchewan and northern Montana, sage grouse make a trans-boundary journey each spring and autumn. Although most sage grouse migrate locally—moving less than 37 miles between breeding and wintering areas—this population covers twice that distance: 75 miles one-way between Canada's Grasslands National Park (GNP) and the Charles M. Russell National Wildlife Refuge (CMR) in Montana. A new study conducted by Jason Tack and Rebecca Newton at the University of Montana tracked these birds with GPS satellite-telemetry to better understand why they migrate so far and how they move across the landscape.

Satellite telemetry offers a more intimate view of animal movements because transmitters can remotely record an animal's location multiple times a day, rather than chasing them around with hand-held antennas. In 2010, the researchers placed GPS transmitters on 24 sage grouse. The transmitters recorded locations four times a day over two years, which allowed the scientists to map migration behavior and display how the grouse used different habitats in the landscape.

In Grasslands National Park and the northern part of Valley County, Montana, sage grouse breed in terrain that is a mix of shortgrass prairie and sparse silver sagebrush (*Artemisia cana cana).* While the silver sagebrush provides good forage in spring, it becomes completely covered by snow in winter. Since sagebrush is all that grouse eat in winter, these birds must migrate to find a reliable winter food source. On the CMR, the grouse are able to survive the winter by foraging in taller and denser stands of Wyoming big sagebrush *(Artemisia tridentata wyomingensis)* that protrude above the snow.

The GPS telemetry revealed that, much like a river with many intertwining braids, grouse follow multiple routes that together serve as a migratory pathway between seasonal ranges. During migration, they follow gently rolling grasslands and sagebrush flats and avoid cultivated croplands. In addition, they move in "stepping stone" fashion, spending up to a day at each of several stopover sites along the way to rest and refuel. Spring and autumn, they average seven to nine stopovers. This type of punctuated movement between stopover sites is typical of many other migratory birds, such as waterfowl and shorebirds, and was recently documented in long-distance migrations of mule deer.



GPS telemetry revealed multiple braided pathways across the landscape as grouse migrated between Grasslands National Park in Saskatchewan and the Charles M. Russell National Wildlife Refuge in Montana. Map courtesy of Jason Tack.

The GPS telemetry revealed another surprise: these birds can adapt their migratory behavior to weather events. In the winter of 2010-11, unusually deep snow pushed the grouse to make a second migration farther south. They moved another 26 to 72 miles to where they were able to find exposed sagebrush on open, wind-blown slopes. Yet despite the heavy winter and longer migration, not one of the tagged grouse died during the harsher winter, showing a remarkable ability to adapt their use of the landscape in the face of changing conditions.

Keeping the Connections

Taken together, these studies underscore that sage grouse require large landscapes of healthy native sagebrush habitat for their survival. The genetic data revealed that sage grouse disperse farther than previously thought, and GPS-tracked birds taught us that sage grouse not only undertake long migrations, but they do so by using

"The results of these studies profoundly changed our view of the landscape and what these birds need. Working in partnership to conserve habitats across a patchwork of ownerships is the only way to maintain the wide-open spaces sage grouse need to thrive."

~John C. Carlson, Montana Zone 1 Greater Sage-Grouse Lead, Bureau of Land Management, Billings.

pathways and stopover sites of intact sagebrush habitat. In addition to conserving seasonal ranges, keeping big landscapes intact is essential for maintaining these birds' movement pathways, which provide for migration and gene flow.

"Without private lands conservation, the value of habitat on public land declines. Both public and private land managers play vital roles in maintaining large and intact landscapes that support ranching and wildlife. Simply put, we're all in this together," explains John Carlson, Montana Zone 1 Greater Sage-Grouse Lead for the Bureau of Land Management.

To conserve sage grouse habitat and movement pathways, the NRCS-led Sage Grouse Initiative partners with agencies, nonprofits, and landowners. Through voluntary projects with private landowners, SGI secures conservation easements to protect native grazing lands from cultivation and subdivision, sets up grazing systems that help producers remain profitable and productive, and removes invading conifers to restore pastures and open up pathways between seasonal grouse ranges. These programs benefit agricultural producers who depend on healthy rangeland for their livelihood, while safeguarding sagebrush habitats and vital connections at the scale sage grouse need.

Intact, healthy rangeland is vital for working lands and wildlife. Photo by Tatiana Gettelman.

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The Sage Grouse Initiative is a partnership-based, science-driven effort that uses voluntary incentives to proactively conserve America's western rangelands, wildlife, and rural way of life. This initiative is part of Working Lands For Wildlife, which is led by USDA's Natural Resources Conservation Service: **www.sagegrouseinitiative.com**

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Cooperation and Trust Conquer Weeds in Sweet Grass County

Story by John Grassy, Montana Department of Natural Resources and Conservation | Photography by Eliza Wiley

Knapweed and leafy spurge, two of Montana's most aggressive and persistent noxious weeds, first arrived in Sweet Grass County in the 1940s. A half-century later, across the broken foothills of the Absaroka Mountains south and east of Big Timber, both species were well-established. Ranchers Leo and Lois Cremer grew up in the area and were certainly acquainted with knapweed and leafy spurge. But it wasn't until they acquired a tract of neighboring rangeland that they had to confront the full scope of the problem.

By the third year, "there was an unbelievable amount of new grass coming into areas where the weeds were eliminated," Leo Cremer said. Blue bunch wheatgrass now flourishes and dominates the landscape.

"It was overwhelming," Leo says. "There hadn't been any weed management. In some areas leafy spurge and knapweed were the dominant species. We stood there staring at it wondering what the heck we were going to do."

Stacey Barta in 2004 was the Sweet Grass County noxious weed coordinator. She wanted to take on the area's weed problem, too. But in order to do it right, she knew the fight would have to continue for a long time – at least long enough to outlast the 8- to 10-year seed supply of knapweed. Nor would it succeed without broad participation from area landowners. A single mature knapweed plant will produce 18,000 to 24,000 seeds per year. If two neighboring landowners are actively controlling weeds and two others nearby are not, a lot of time, effort and money can be wasted.

Barta saw an opportunity in 2004 when she learned the Natural Resources Conservation Service (NRCS) had a special initiative to fund long-term weed management on a watershed scale. She sat down with Chuck Roloff, district conservationist for NRCS in Big Timber, and Joe Fidel, then the NRCS Bozeman-area resource conservationist, to learn what she would need to submit in a grant application.

The first requirement may have been the most challenging. It was Barta's job to contact every landowner in the watershed, explain the opportunity at hand, and the potential costs and benefits.

"I spent a lot of time going to houses, having coffee, and teasing out what each landowner might be willing to do," says Barta. "I stressed the negative environmental impacts of invasive species on their operation and the environment. With proper weed control they would end up with more forage on the ground for their cows and better habitat for wildlife."

Leo and Lois Cremer wanted nothing more than to conquer their weed problem. They were happy to sit down and listen to Stacey. But the project was a huge commitment of time and money. What if it didn't pan out?

"Everybody was a little leery of working with the government," Leo says. "You're signing your name to a contract, committing to do a huge amount of work for ten years. That's a long time. There was a lot of money involved. It was scary, it really was."

The Cremers and Stacey Barta, a project manager turned rangeland specialist for the Montana Department of Natural Resources, reminisce about the role trust played in the project.

So what made the difference?

“We knew Stacey, and we knew Chuck, and they were convinced it would be a good deal for us,” Leo says. “Lois and I decided to trust what they said.”

Stacey Barta put together the grant proposal, which NRCS approved. The Yellowstone South Cooperative Noxious Weed Project had commitments from 17 private landowners, with properties ranging in size from 7,000 to 100 acres. The 30,000-acre project area encompassed four watersheds, all of which drain to the Yellowstone River. Along with private lands were scattered parcels managed by the Montana Department of Natural Resources and Conservation and the federal Bureau of Land Management. Montana Rail Link, which owned approximately 300 acres in right-of-way along its tracks, also participated.

Though he may have some misgivings about the government, Leo Cremer has always been willing to explore new ideas for improving his operation. “If you want to survive, you’ve got to progress,” he says. As the weed-control project was taking shape, Chuck Roloff approached Leo with an idea to further enhance the benefits from eliminating weeds: a new grazing plan.

The plan called for dividing Leo’s largest pastures into smaller units. In several of those new pastures, Leo had a well put in; a solar-powered pump delivered water to a stock tank for the cows. The reconfigured pastures and new water sources would enable the Cremers to better distribute and manage the number of cows grazing in a given area, and the amount of time they spent grazing each area; it would also move them away from creek bottoms and riparian areas.

“We went to a deferred rotation,” Leo says. “With the new plan, we wouldn’t put cows on the same pasture in the same season two years in a row. It gives your grasses a chance to grow back.”

The ultimate goal, Roloff says, was to boost the overall vitality of the Cremer’s shortgrass prairie rangeland. “It doesn’t take long if you’re improving your grazing management,” Roloff says. “You’re leaving more mulch; you’re conserving more precipitation, decreasing evaporation, and your plants get happier. They’re building stronger root systems, expanding to cover bare ground, getting more resilient, and much more competitive against noxious weeds and other invasive plants.”

In 2006, the Cremer family launched an all-out assault on their weed problem. The plan called for a combination of herbicide spraying and biological controls (releasing insect species that feed upon leafy spurge and knapweed). The project was a cost-share agreement: the Cremers would pay for the upfront costs, then submit invoices at the end of each year for reimbursement. Early on they realized that aerial spraying from a helicopter was the most effective way to apply herbicide on the hilly, broken terrain. In order to offset that cost, the entire family – Leo, Lois, and their two children – did the ground spraying themselves.

“It was a hell of an undertaking,” Leo says. “In the first year our costs were more than $60,000. Without the grant money there’s no way we could have done it.”

Under the summer sun they worked in Tyvek suits and rubber gloves, one person driving a four-wheeler while the other

walked behind with the sprayer. At other times, each family member carried a backpack sprayer. On level ground they could treat 20 acres in a day. In rough terrain they covered three or four acres. They logged hundreds of hours, and when the spraying was done each day, they still had all the usual ranch work left to do.

Chuck Roloff, NRCS district conservationist, monitoring grasses for rangeland health in Sweet Grass County, Big Timber, Montana.

But it didn't take long to see results. "The change after the first year was dramatic," Leo says. "You couldn't believe the difference." By the third year, the combined effects of the weed-control effort and Leo's revamped grazing plan were evident. "There was an unbelievable amount of new grass coming into areas where the weeds were eliminated," he says.

The battle went on. The massive root system of a single leafy spurge plant reaches 20 to 30 feet deep. In addition to producing seeds, leafy spurge spreads through nodules on its lateral roots. "A spurge plant that's been in place for three or four years is established, and you've got a serious fight on your hands," says Chuck Roloff. "Going after the new starts is actually more important. With the older plants, the goal is to suppress seed production and spread."

As the project continued, Leo worked with Chuck to set up a monitoring program. They established sites in pastures and took photographs each year. "If you keep looking at the same piece of ground over time, you should see some improvements," says Chuck. "This was really helpful for Leo – he could see the physical differences, the positive changes to his rangeland."

In some areas of the Cremer ranch, the ratio of weeds to grass was 80-20 when the project started. In many of those sites, that ratio has been reversed. With more forage, the Cremer's cows are doing better, and there's more for the deer, elk, and other wildlife. "Without this project we would still have weeds everywhere," Leo says. "It has surely put more feed on the ground. We still work on it every year and I think we will forever. It's an ongoing battle. You've got to stick with it."

It's estimated that noxious weeds today infest 8.2 million acres in Montana, and spread at a rate of 10 percent every year; the minimum management cost for dealing with weeds is projected at $47.00 per acre. "Invasive species have great potential to harm our state's rangeland resource," says Stacey Barta. "Weeds impact wildlife habitat – they displace forage and cover. They impact a rancher's bottom line. They decrease natural diversity. And you can see other problems like increased soil erosion."

Leo and Lois Cremer laughing and appreciating the fruits of their labor over the past 11 years.

The Yellowstone South Cooperative Noxious Weed Project succeeded on the basis of personal relationships, commitment, and a massive amount of hard labor. "Everybody held up their end of the deal," says Leo. "It takes good people for something like this to work. We had a good county weed coordinator in Stacey and a good person at NRCS in Chuck."

"This project had 20 different landowners," Barta says. "That's a lot of trust. If we couldn't have gotten that participation, the project never would have succeeded."


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SAVING THE Sagebrush Sea

by Kasey Rahm

The blue-green tint of sagebrush is just as much the color of elk country as golden aspen or dark, timbered woods—and every bit as vital.

Nineteen-year RMEF member Tim Griffiths knows he has an elk problem. "I'm a bowhunter. I've bowhunted elk for 30 years. It's a sickness," he says. "All my leave every year is spent in September, chasing elk."

Excitement creeps into his voice.

"The other 11 months, I'm scouting, training, preparing. It's a 365-day adventure for me."

He picks up speed, the words flowing faster now.

"I can't even tell you how much I love elk. They're just the coolest animal in the world. They inhabit the coolest places that you then have to explore to find them."

A long sigh full of the heavy weight of mid-July, a yearning for fall.

"And that time of year when you're bowhunting them, and the leaves are changing and the mornings are cool, it's a religious experience that just transforms you. I can't think of a thing I'd rather do than bowhunt elk in the fall out West."

When he's not hunting elk or thinking about hunting elk, Griffiths works to conserve some of those coolest places for them—well, technically mainly for sage grouse, but elk also call sage grouse country home. The blue-green tint of sagebrush is just as much the color of elk country as golden aspen or black timber—and every bit as vital.

Griffiths, based in Bozeman, Montana, is the Western coordinator for the Natural Resources Conservation Service's (NRCS) Working Lands for Wildlife partnership. What drives him is a deceptively simple goal: implementing conservation and stewardship that deliver maximum benefit to both agriculture and wildlife on the largest scale possible. When it works, people, cattle, elk and a seven-pound bird with one of the weirdest mating rituals in America all win.

Funded by the Farm Bill, NRCS spearheads the Sage Grouse Initiative (SGI for short), a massive effort to restore these birds. From an estimated 16 million birds when Lewis and Clark ventured west, this signature species of the sage has lost more than half its range and 98 percent of its population. Roughly 200,000 birds remain today. Almost 40 percent of current sage grouse range overlaps elk range and more than half of SGI's conservation easements lie in prime elk country. So it's only natural RMEF and SGI, which falls under the Working Lands for Wildlife umbrella, have

PHOTOS: TOM AND PAT LEESON / CHUCK AND GRACE BARTLETT








joined forces on dozens of projects to conserve vital habitat (See "Sage Grouse & Elk = Peanut Butter & Jelly" on page 104).

Elk and sage grouse share 40 million acres of sagebrush across the American West. It's no coincidence that the 11 states where sage grouse persist—California, Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming—are also home to some of the best elk hunting anywhere.

Sagebrush is a blanket term referring to at least 20 different bushy plants in the genus Artemisia, but the term also refers to the sagebrush ecosystem—sometimes called the sagebrush steppe—and all it encompasses. While the specifics of sagebrush country vary from place to place, it's generally a vast, open, arid landscape featuring a mix of native shrubs, grasses and forbs. Covering almost a third of the United States, it's usually treeless, and the wide-open-spaces vibe coupled with sagebrush's blue-green tint lends itself to poetic laments about the sagebrush sea.

"A lot of people as they fly over may just see a bunch of shrubs across millions of acres, but once you get into it you realize that it's an incredibly diverse ecosystem," says Griffiths.

Sagebrush country is dry—a cold desert in some places—but it is well adapted to make the most out of the water cards it's dealt. The result is surprisingly rich. Over 350 species of plants and animals inhabit and depend on the sagebrush ecosystem. Pronghorn dwell there year-round. Elk and mule deer rely on it in winter and relish it in the other seasons. A host of smaller mammals live here, from pygmy rabbits and sagebrush voles to badgers and coyotes. There are scales and fins from sagebrush lizards to redband trout. Birds, too—raptors down to Brewer's sparrows. Scores of species use sagebrush to meet seasonal habitat requirements. And some, like the sage grouse, inhabit sagebrush year-round and are wholly dependent on the ecosystem.

Despite all the unique life found here, sagebrush is one of the most imperiled ecosystems in North America. Two hundred years ago it covered over 240,000 square miles. Barely half of that remains.

"When our forefathers were settling this country they found there was a lot of fertile ground underneath all that sagebrush," Griffiths says. That led to a massive conversion of sagebrush to farmland around the turn of the century as settlers pushed west and provided food for a growing nation.

"Today there's not really any one threat that impacts the system," Griffiths says. "Rather it's death by a thousand cuts."

What those cuts are depends on which part of the sea you sail.

"In Montana, the number one threat is conversion of our native range to crop production. That's our issue we're dealing with, fragmentation of that larger landscape though crop production. If you were to say that to people in Oregon or Nevada, they'd look at you like were crazy," Griffiths says. "In their eyes, it's an invasion of the native sagebrush community by cheatgrass and medusa head." (See "Death by A Thousand Cuts" on page 102).

But all of the threats have one thing in common: they break up the landscape. They turn the vast sea into isolated potholes.

"The truth is anything that fragments that large, intact landscape ultimately ends up causing the demise of sage grouse and so many other species," Griffiths says.

Why should elk hunters care about keeping sagebrush intact? In a word, winter. Sage sustains countless herds through the toughest months. But even that undersells the sagebrush ecosystem. Come spring cow elk all across the West seek out sagebrush as an ideal place to give birth and hide young calves from predators during those critical first weeks. Many of the best remaining migratory corridors are made up largely of sagebrush. And as countless hunters can attest, elk are no strangers to sage from September through November, either.

"If we want wild, free ranging populations of elk, we have to have large, intact, connected landscapes. Period. You can't have one without the other," Griffiths says. "The scales of land that are in need of conservation far outstrip the supply of funds from any single organization or agency. We as hunters, as conservationists, as private landowners and government stewards, need to pool all resources and work together to ensure these landscapes are conserved for future generations."

CLOCKWISE FROM TOP RIGHT: KENARCHERPHOTOS.COM / KENARCHERPHOTOS.COM / CHUCK AND GRACE BARTLETT / CHUCK AND GRACE BARTLETT / DONALDMJONES.COM / KEITH CROWLEY / TOM AND PAT LEESON / CHUCK AND GRACE BARTLETT / KENARCHERPHOTOS.COM

Elk & Active Management

"We've always recognized the importance of sagebrush, not only to elk but to a lot of other species as well," says RMEF Director of Science and Planning Tom Toman. The Elk Foundation funded its first two habitat enhancement projects in the sagebrush steppe in 1987. RMEF contributed $1,000 to a prescribed burn in Montana's Elkhorn Mountains that treated 1,008 acres of sagebrush, grasslands and aspen to reduce conifer encroachment on the Helena National Forest. That same year, the Elk Foundation also contributed $3,000 to the Disappointment Valley Habitat Enhancement project, the first phase of a 10-year program to enhance habitat on key elk range and reduce ag/wildlife conflict on the San Juan National Forest in southwest Colorado. The funding helped treat 100 acres with prescribed fire, install two water guzzlers and close three miles of roads to stabilize soil and limit erosion.

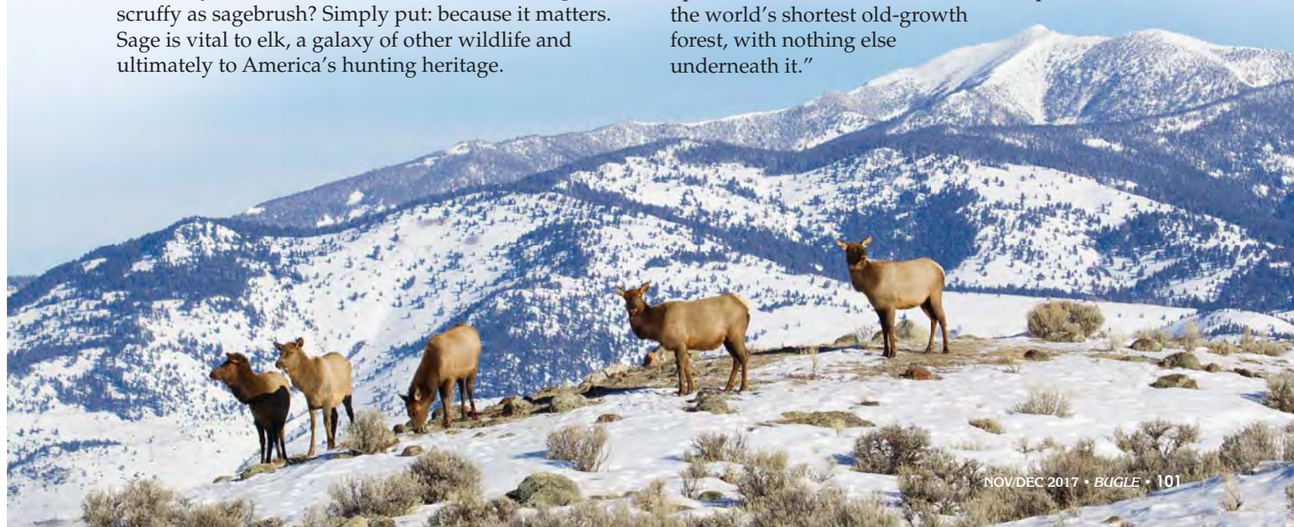
Since then, RMEF has contributed to over 500 habitat projects in sagebrush country, allocating more than $3.6 million that leveraged another $49 million in partner funds. On the ground, that translates to more than 550,000 acres of sagebrush ecosystem enhanced so far. On top of that, RMEF has forever protected another half a million acres of prime sagebrush elk country in 10 states.

Why invest this kind of effort in something as scruffy as sagebrush? Simply put: because it matters. Sage is vital to elk, a galaxy of other wildlife and ultimately to America's hunting heritage.

Toman is quick to point out that sagebrush is often the only plant protruding above the snowline, providing essential winter forage for elk, mule deer, pronghorn and other animals. It also absorbs sunlight. That in turn heats and softens the surrounding snow, allowing animals to break through to reach grasses at the base of the plants. At the same time, sagebrush holds snow in place, keeping moisture on the landscape longer into spring. Sage comes in handy in late summer, too, providing forage long after other plants have dried out.

RMEF supports sagebrush country by conserving the most crucial land through acquisitions and conservation easements and by funding habitat stewardship projects. Many of those projects focus on promoting diversity and resiliency in the sagebrush ecosystem by keeping the range young and productive. Just like people can't survive off a single food item (no matter how tempting eating just Oreos for the rest of your life may sound), elk and most other wildlife don't do well with a monoculture. That's why RMEF selects and funds work that creates diversity on the range by jumpstarting succession. Many projects aim to mimic natural disturbances, either through prescribed fire or mechanical treatments like dixie harrowing.

"Sagebrush goes into an old growth form, too," Toman says. "If you look under old sagebrush there's no grasses, no forbs and no new sagebrush coming up. It's a decadent situation. You end up with the world's shortest old-growth forest, with nothing else underneath it."



Boots on the Ground: Wyoming

Wyoming is the stronghold for sage grouse. Almost 40 percent of America's total population lives there. Not surprisingly, it's prime sagebrush country—and it's not a bad place for elk, either.

"I think the sagebrush ecosystem in Wyoming was historically undervalued," says Ian Tator, Wyoming Game and Fish Department's statewide terrestrial habitat manager. "What we've learned is that ecosystem is diverse and resilient and above all important to wildlife, from sage thrashers all the way up to elk. The investments we make now to conserve it will be expressed many times over in healthy and vibrant wildlife populations into the future."

Sagebrush stewardship in Wyoming is guided by the Sage Grouse Core Area strategy. That strategy recognizes large tracts of sagebrush habitat critical to sage grouse life cycles and important to lots of other wildlife, too. The state focuses management efforts there.

"Wyoming is lucky to have significant intact sagebrush communities," Tator says. "That said, the challenges to maintaining this ecosystem are real, and they're often complex and intertwined. So meeting the current and future needs of both wildlife and the people who depend on sagebrush requires significant coordination and buy-in."

The state does a lot of what Tator calls active conservation restoration work in sagebrush communities.

"In a lot of places we've got older stands of sagebrush that are less productive than they once were," he says. "So we'll do some sort of action that promotes sagebrush vigor to ensure it maintains itself over time."

On the ground, that equates to disturbance. Disturbance is a double-edged sword. A hot fire pushed by high winds through dry sagebrush can actually kill sagebrush or serve as a vector for weeds like cheatgrass. More often, though, fire offers sagebrush deliverance by promoting new growth of the entire tasty ecosystem. Disturbance is a threat, but also a tool. The key is to match the right tool to the right landscape. Luckily, there are a lot of different options in the toolbox.

Sometimes that means prescribed fire, especially in wetter areas where mountain big sagebrush is likely to respond well following the flames and in areas where cheatgrass is less of a concern.

In Wyoming, it more often means mowing. "There's a lot of ways to mow," Tator says. "Historically, folks used mowing as a tool to remove sagebrush. But we found that when you lift up the mower deck height, that action triggers those plants to put on vigorous leader growth and really stimulates them to come back."

While those practices have been put into action all across the state—and the country, for that matter—one good example is the Devil's Canyon area. Located on BLM land, Devil's Canyon encompasses 72,000 acres of rolling sagebrush range in the foothills of Wyoming's Bighorn Mountains. After Devil's Canyon Ranch owners closed the only road access to 20,000 acres of adjacent public land, the Trust for Public Land, RMEF and other partners purchased the 11,179-acre ranch in 2003 with key additional funding from the Land and Water Conservation Fund, turning it over to the BLM to become public land. RMEF continues to help enhance the area through prescribed burns, forest thinning, cheatgrass and other invasive weed treatments, and more.

"These sagebrush ecosystems are open country with beautiful views of mountains, canyons and buttes," says Destin Harrell, BLM wildlife biologist for the Cody field office. "Big game herds travel freely with great vantage points, able to see predators from miles away. The vegetation is diverse, with sagebrush giving structure to the habitat. Sagebrush shades and protects other plant species so they flourish."

Devil's Canyon is home to three distinct sagebrush communities: black sage on lower benchlands, Wyoming big sagebrush in the foothills, and, higher up, mountain sagebrush. Wyoming big sagebrush (not exclusive to Wyoming) is found on lower, drier sites. Roughly two to three feet tall, it is the plant that sage grouse depend on almost exclusively. Mountain sagebrush, on the other hand, is usually found higher up, in the areas most often frequented by elk. It grows faster and historically burned far more often—once every 30 years or more, and responds very well to prescribed fire, bouncing back quickly with a flush of grass and forbs.

There's also a healthy mix of wildlife and ag, with multiple grazing allotments practicing rotational grazing. To benefit both livestock and wildlife, the BLM's Cody field office does a lot of mowing, and they are in a constant battle against invasive cheatgrass, which they combat through aerial spraying. And then there's the conifer encroachment.

"We've seen historic photos of sagebrush benches that no longer have sagebrush. Twenty years ago, you start to see juniper encroaching in. Today, it's almost entirely choked with juniper," says Bryan McKenzie, BLM rangeland management and cave specialist based at the Cody field office. "We try to take a proactive approach before it gets so late successionally that it has a really hard time returning from disturbances like fire."

One treatment they use frequently is individual juniper burning.

"When the timing is right, we go into these areas when the sagebrush has a hard time burning but the juniper burns readily and light one tree at a time across a landscape. It takes a lot of time and manpower to cover the acres we want to do," McKenzie says. "Every juniper matters, whether it's 10 feet tall or knee-high. We try to get everything we can across these landscapes. We've really made a dent, and it looks really good in some of our treatment areas."

McKenzie adds, "The Elk Foundation has helped fund a lot of these. We've been partners with RMEF since the early '90s."

Thanks to these conservation efforts, hunters flock to the Bighorns every fall to chase elk and soak up the peace of the sagebrush steppe.

"Sagebrush holds the ecosystem together," Harrell says. "It's the thread that runs throughout the range."

Death by a Thousand Cuts

The threats to sagebrush vary by locale, but the most pressing can loosely be lumped into five categories.

1. EXPLOSIVE INVASION, EXPLOSIVE MEGAFIRES

Exotic invasive grasses, primarily cheatgrass and medusa head, are displacing native grasses at a staggering rate. The plants out-compete native grasses and forbs, stealing limited moisture and nutrients and providing little to no nutritional value to wildlife in return. Maybe even more terrifying, they green up early then die early. By the time early summer storms arrive, they're a tinderbox just waiting for a spark. That leads to massive, catastrophic wildfires out of sync with the natural fire system and on scales never seen historically—burning hundreds of thousands of acres in hours rather than years.

2. TREES WHERE NONE BELONG

While native to the West, junipers and pinyon pines historically grew far more sparsely on rocky outcroppings and pockets of shallow soil. But a hundred years of fire suppression combined with historical overgrazing left the range out of balance and vulnerable. Conifers now muscle across what for millennia were treeless landscapes. Each pinyon or juniper guzzles roughly 35 gallons of water per day, leaving little or no moisture for anything else. That makes for a landscape dominated by trees with nothing but bare dirt in between.

3. DEVELOPMENT: ENERGY & SUBDIVISION

The development threat is two-pronged. In some places, massive gas, oil and to some degree solar and wind fields—along with the attendant web of service roads—transform sagebrush. In others, the main threat is conversion of large ranches into ranchettes or outright subdivisions. The place where everyone wants 40 acres and a house looking at the mountains where they don't have to shovel the snow every day—that's sagebrush country.

4. CONVERSION TO CROPLAND

A century ago, settlers figured out there was good dirt below all that sagebrush. They plowed and tilled huge chunks of rangeland. In that cropland, an acre that was formerly home to more than a hundred species of native plants now holds as few as one exotic. Plowing these shrublands compounds the risk of erosion and soil loss. Also, most crops require irrigation, placing further demands on already scarce water supplies. Conversion to cultivation remains a real threat today.

5. LOSING WETLANDS

Have we mentioned water is a limited, vital resource in sagebrush country? The places that pulse with the most life on the sage steppe are the little green ribbons of year-round and seasonal streams, along with springs and wet meadows. These riparian resources are by far the most important and productive areas for both wildlife and livestock. Unfortunately, they have largely been degraded over the last century by all of the factors listed above.

PHOTO: KENARCHERPHOTO.COM

Sage Grouse & Elk = Peanut Butter & Jelly

The Sage Grouse Initiative has a saying: What's good for the bird is good for the herd. They mean cattle, but it holds every bit as true for elk.

Greater sage grouse are an icon of the sagebrush steppe—and fully dependent on the habitat. There were an estimated 16 million of them when Lewis and Clark ventured west. Since then, the species has lost more than half its range and 98 percent of its population. By 2010, prospects looked bleak enough that the U.S. Fish and Wildlife Service designated the bird as a candidate for protection under the Endangered Species Act. Given the implications that listing could have, the Fish and Wildlife Service built a long runway, saying they would make a decision on whether to formally list the species by 2015. Sage grouse inhabit 186 million acres in 11 western states. Much of that lies on federal public land, but private lands hold the lion's share of the most vital core habitat. No matter who owns it, almost every one of those acres is grazed by domestic livestock.

When NRCS took on the challenge of stabilizing and restoring sage grouse, they saw a grand opportunity to make a lasting difference by also helping to keep working ranches healthy and viable.

"The more we learned about the issue, we realized the threats facing sage grouse were the exact same threats as those impacting our Western ranches," says Tim Griffiths, western coordinator for the Working Lands for Wildlife partnership. "We decided to turn the threat into an opportunity, couple the threats facing ag and the bird, and then focus enough of the right practices in the right places to proactively conserve the species while increasing the productivity and sustainability of the Western ranching community."

What followed was a sweeping and collaborative conservation effort as the federal government, states, ranchers and nonprofits—RMEF included—came together in a grassroots-level movement spearheaded by the Sage Grouse Initiative. The goal was to save sage grouse without all the mandatory restrictions triggered when a species is listed as Threatened or Endangered. State and federal agencies went to work collaboratively implementing land use plans to conserve habitat on public lands, while SGI and other partners tackled the private land component.

"We went to work on a 100 percent voluntary, incentive-based approach with ranchers who were willing to implement beneficial practices. The response was overwhelming," Griffiths says. "Since 2010, we've worked with over 1,500 ranches in 11 western states and conserved 5.6 million acres—each acre customized to address the local needs that were identified for both wildlife and agriculture.

"This is a partnership in the truest sense of the word. No agency or individual or group owns it," Griffiths says. "Everybody does."

The Elk Foundation has partnered with SGI since 2011. Early on, SGI realized they needed more boots on the ground if they were going to make the collaborative work. Local NRCS field offices—one in every county—sometimes only had one employee. For the effort to succeed, they needed help, more range conservationists, biologists and other knowledgeable people. Instead of just hiring more federal employees, SGI reached out to partners to pool resources. The partner organizations supplied the employees and NRCS provided the field offices, the supplies, training and other support.

"RMEF was one of our very first investors in those shared positions," Griffiths says. The Elk Foundation funded a biologist field staffer in one of the places where elk would also benefit most—Craig, Colorado. The world's largest elk herd winters on sagebrush nearby.

RMEF and SGI have partnered on dozens of projects together—from conservation easements to land acquisitions to stewardship—with the mutual goals of protecting and enhancing large, intact pieces of habitat and keeping them that way. Our most recent collaboration was a conservation easement on Nevada's Wildhorse Ranch that forever protected 4,500 acres of prime habitat from subdivision and development and opened hunting access to another 19,000 acres of national forest beyond.

In 2015, the U.S. Department of the Interior announced the efforts had paid off and greater sage grouse did not require listing under the ESA.

Griffiths is also quick to credit arguably the most important partner of all. "Whether you're a sage grouse enthusiast, an elk nut or a mule deer fanatic, if you love wildlife, you should thank a Western rancher," he says. "They are really the conservation heroes in the story that are holding these large public/private mosaics together in a sustainable manner."

PHOTO: RMEF / INSET PHOTO: CLIFF REYNOLDS / GRAPH: JOE SMITH, SGI RESEARCH SCIENTIST

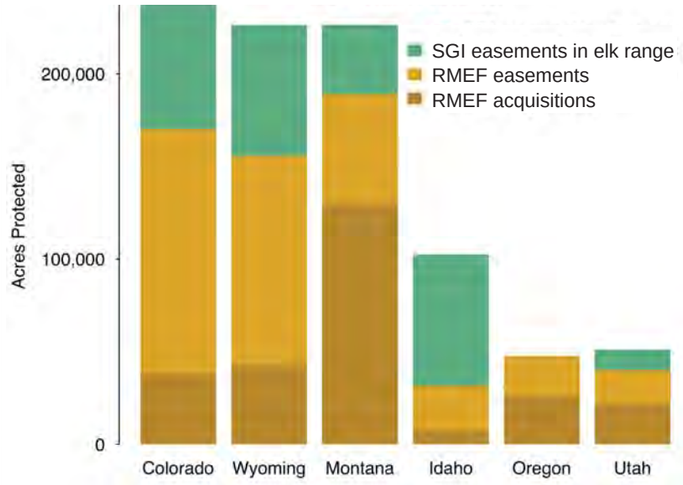
In the most recent sage grouse news, Secretary of the Interior Ryan Zinke issued an order in June for the Department of Interior's Sage Grouse Review Team to work with the states and reevaluate the sage grouse conservation strategy adopted by the BLM in 2015. The review team sent the Secretary its scoping report highlighting issues expressed by states and others about obstacles to energy development and options for addressing them. On August 4, Zinke issued a memo directing Interior officials to begin implementing recommendations listed in the report. While nothing much has happened just yet, several key elements of the federal plans have been targeted for modification or elimination. These include elimination of Sagebrush Focal Areas. These are important landscape blocks with high densities of sage grouse breeding populations and existing high-quality sagebrush habitat that anchors the conservation value of the landscape. Also included are changes to energy development buffer distances and variations to priority and general habitat management areas and mitigation standards. The report calls on the BLM to improve the overall compatibility of their federal 2015 Sage Grouse plans with the plans developed by each state that has populations of the grouse. It also identifies opportunities to improve coordination on fire, fuels and invasive species management.

The most controversial portions of the review pertained to language about captive breeding and population targets referenced in the original secretarial order. Some stakeholders feared that if population targets became the primary benchmark for recovery, habitat protections would be removed and instead captive breeding would be used to meet population objectives. While beyond the purview of federal land management agencies, captive breeding still appears to be on the table. Captive breeding has so far proven costly and ineffective for achieving sage grouse priorities. The review team determined that further research and work is needed before captive breeding can be fairly evaluated. They recommended the DOI continue to investigate new captive breeding efforts to improve effectiveness. Additionally, the team recommended pursuing the possibility of establishing a statewide or range-wide sage grouse population objective but cautioned that any population objective would have to reflect sage grouse's natural variability and be tied directly to habitat availability and quality.

SGI continues their work to protect sage grouse through the current Farm Bill—which expires in 2018—and continues addressing the largest threats to sagebrush and the wildlife and livestock that depend on it. Meanwhile, RMEF is committed to maintaining its long-standing support of collaborative, on-the-ground partnerships that improve habitat for elk, sage grouse and a wide variety of other wildlife, as well as cattle and the people whose livelihoods depend on this land.

"We've seen what we can accomplish together by focusing on these landscapes," Griffiths says. "We've made so much investment and so much progress. Now we need to continue to do that where the need is greatest, but also to maintain those landscapes where we've made so many gains."

SGI CONTRIBUTION TO ELK HABITAT PROTECTION IN TOP 6 ELK HARVEST STATES



Just as RMEF projects benefit other wildlife, Sage Grouse Initiative projects benefit elk. In fact 52 percent of SGI's conservation easement acreage falls within elk range, providing permanent habitat protection for grouse, elk and other species. This graph shows the acres RMEF and SGI have protected permanently through acquisitions and conservation easements in the six states with the top elk harvest rates in the country—all of which contain vital sagebrush-steppe.

Visit the Elk Network to learn more about elk in sagebrush and to watch videos of dancing sage grouse at **ElkNetwork.com/Bugle**