From:	Davis, Dawn
To:	Carol Schuler
Cc:	Tomosy, Monica S -FS; Jeremy Maestas; Karen Prentice; Robin Wills; Todd Hopkins; Tomer Hasson; Heidi Hadley; Sue Phillips; Hall, Galon - NRCS, Washington, DC
Subject:	Re: Latest Draft of Section 7bviii
Date:	Tuesday, March 10, 2015 9:44:55 AM
Attachments:	SO Action Plan.7bviii.v3_TH&DMD edits.docx

A few suggestions, which I added to Todd's revisions - one thought is to combine the WAFWA reports (Gap & Fire/Invasives) into one bullet. I provided the hyperlink to the 2 WAFWA reports that are available.

On Sun, Mar 8, 2015 at 7:35 PM, Carol Schuler <cschuler@usgs.gov> wrote:

> Attached is the latest draft of our section. Please review this draft and provide me comments via track changes. You will see I have beefed up some of the sections and added some of you earlier input. I did make an effort to reduce some of the language since I think our section is getting too long. Keep this in mind when reviewing this draft (we should get shorter, not longer) Where possible provide specific edits, rather than just comments. My time is really short this week with attending the North American meetings. **Please send me any comments by March 11, sooner if you have them.**
>
> This draft is for review by our team only. Once I incorporate comments from everyone, we can go out for another review.
>
> Carol
>
> ---
>
> *Carol Schuler, Senior Science Advisor*
>
> *Ecosystems Mission Area*
>
> *U.S. Geological Survey*
>
> *541-750-1031 (office)*
>
> *541-231-8982 (cell)*
>
> *cschuler@usgs.gov*
>
> ---

--
Dawn Davis, Ph.D.
Certified Wildlife Biologist ®
U.S. Fish and Wildlife Service, Pacific Regional Office
911 NE 11th Avenue, 4th Floor, Portland, OR 97232

Office: 503.231.6194; Cell: 503.784.7429; FAX: 503.231.6243
dawn_davis@fws.gov

Section 7(b) viii. – Integrated Response Plans

Issue Description/Overview

Commit to multi-year investments in science and research.

To develop an enhanced rangeland fire prevention, suppression, and restoration strategy, scientific information will be needed that focuses on the highest priority management needs and adapts as new knowledge is gained or management needs shift. Although a large body of research has been completed for the Great Basin, key gaps in knowledge still exist. In some cases, gaps can be addressed through synthesizing a large body ofexisting research to develop an understanding of how to apply the cumulative body of science. In other instances the information is available, but not readily accessible or useable by the management community. Addressing priority science gaps, synthesizing broad scientific information, and ensuring full and easy access to science can only be achieved with a unified focus on the highest priorities and with a long-term commitment of financial resources.

A comprehensive science action plan will be developed that identifies science gaps, and priority research and monitoring needs to ensure the protection, conservation, and restoration of sagebrush-steppe ecosystems, and in particular greater sage-grouse habitatneeds in direct support of resource management issues. The action plan will take into consideration the need for science syntheses, along with new research endeavors and the delivery of science delivery. The action plan will be used to direct regular and recurring investments in scientific research and information delivery. Through this effort we The proposed action plan will expand collaboration between the management practitioners and the science community, and ensure focus on the highest priority research needs to ensure greater sage-grouse habitat is protected.

Methodology

The lead agency for developing actions associated with this sub-section of the Order is the USGS. USGS worked with the BLM, FWS, NPS, GBLCC, USFS, and NRCS to develop the proposed actions outlined below. Additional coordination with states and Tribes will occur through specific actions identified below. Completed science strategies, such as the Sage-grouse National Research Strategy, and other efforts described under the Actions Underway section below, provide the foundation for development of a science action plan for the Order. These existing and ongoing efforts included identification of science needs for fire, invasive plansrangeland fire prevention, controlling cheatgrass and other invasive grasses, restoring sagebrush landscapes and, in particular greater sage-grouse habitat, restoration, and greater-sage, and will provide an expedited process for identifying priority science needs in the Great Basin.

Actions Underway

In the past two years, federal and state agencies have made considerable strides in identifying and prioritizing science needs for suppressing rangeland fire and ~~and~~ controlling invasive plants~~, and~~for the benefit of greater sage-grouse~~ and sagebrush conservation and management~~. Some of these efforts span a much larger range than the Great Basin and address broader issues than fire and invasives~~ species~~. However, they include broad discussions and thinking across federal and state agencies, and provide the best starting place to identify priority needs. These completed and ongoing efforts will provide the foundation for developing a science action plan for the Order. The following paragraphs describe completed and ongoing science and research prioritization efforts.

- *Greater Sage-grouse National Research Strategy* - USGS led the development of the Greater Sage-Grouse National Research Strategy at the request of the Western Association of Fish and Wildlife Agencies (WAFWA). The Strategy, published in 2013, documents information gaps and identifies priority research needs to inform future planning and management activities. Research needs were prioritized by an interagency team of federal and state experts.
- *Gap Report* – The WAFWA Gap Report (available at: http://wafwa.org/documents/Wildfire-Invasive-WG-Final-Gap-Analysis-Report-Final.pdf)~~add a hyperlink~~) identifies and summarizes the policy, fiscal, and science challenges that land managers encounter related to the control and reduction of the invasive plant/fire complex, especially as it relates to the status of the greater sage-grouse. In an effort to provide managers an opportunity to address the most important issues, the Gap Report identifies the top 5 gaps. Beyond these top 5, the Gap Report identifies 17 additional gaps that should be evaluated by both federal and state agencies as a means to help ameliorate the wildfire/invasive threat in the West.
- *BLM/USGS sagebrush restoration/rehabilitation research needs* - The BLM and USGS organized a workshop in July 2014 that brought together federal and state agencies to identify management questions and related science needs regarding risks to, and improvement of, sagebrush habitat for the benefit of greater sage-grouse in the Great Basin. An interagency team is in the process of refining the science needs and seeking input on prioritization of these needs.
- BLM Implementation Strategy – The BLM developed an Implementation Strategy to further advance science in the BLM's everyday work. Recognizing the increasing importance of science-informed decisions, BLM undertook an internal assessment of scientific activities and opportunities from 2012-2014. The resulting Science Implementation Strategy framework will be used by BLM to guide all science conducted and used to inform management decisions.

Comment [DMD1]: This can be combined with the WAFWA reports below.

- USFS Research and Development Sage-grouse Conservation Science Strategy – USFS scientists and managers prepared a 2015 science strategy to summarize USFS strengths, capabilities, partners, past and current research, and potential future priority areas for sagebrush ecosystems and greater sage-grouse conservation ~~science~~. The strategy identifies research goals and actions, facilities and locations, science-based needs of the National Forest System, and the unique niche of USFS science relative to plans and strategies of other agencies and organizations.

- USGS Research Plan – USGS is in the process of refining a greater sage-grouse and sagebrush-steppe ecosystem science strategy. This effort will outline the research capabilities within the agency and help focus research commitments over the next 5 years. The research plan will be a guiding document to help address the priority science needs contained in the National Research Strategy and identified at the BLM/USGS restoration workshop. This document will provide a framework to help USGS identify and address emerging science needs while remaining responsive to the ongoing needs of DOI partners.

- Bromus Reenet – "Exotic Brome Grasses in Arid and Semi-Arid Ecosystems of the Western US: Causes, Consequences, and Management Implications", a new book to be published in 2015, will provide a comprehensive synthesis of information on the exotic invasive annual grasses in the Western U.S. Chapters by approximately 30 researchers and managers include a thorough summary of research needs for invasive brome grass biology, geography, pathology, ecology, sociology, and economics.

WAFWA Wildfire and Invasive Species Initiative – The WAFWA Wildfire and Invasive Species Initiative Working Group recently produced two documents: *Fire and Fuels Management Contributions to Sage-Grouse Conservation*, and *Invasive Plant Management and Greater Sage-grouse Conservation*. The first summarizes the current state of Fire Operations and Fuels management functions, and presents a series of recommendations that may inform future policy and allocation decisions. The second report identifies several key challenges which significantly affect our ability to effectively manage invasive plants. It makes recommendations about the problems associated with invasive plants and their effect on proper management of the sagebrush-steppe ecosystem. ~~WAFWA – fuels mgt/invasion plan The WAFWA Wildfire and Invasive Species Initiative Working Group has produced two recent documents: *Fire and Fuels Management Contributions to Sage-Grouse Conservation*, and *Invasive Plant Management and Greater Sage-grouse Conservation*, both of which have syntheses of their respective issues along with management and policy recommendations.~~

- SageSuccess Project: Sagebrush restoration for ~~G~~greater sage-grouse habitat needs. The SageSuccess Project is a joint effort between USGS and BLM to better understand how to establish big sagebrush, and ultimately sage-grouse habitat, across the range of the ~~G~~greater sage-grouse.

Formatted: Default, No bullets or numbering

Comment [DMD2]: http://wafwa.org/documents/WAFWA_Fire%20Report%20v1.01.pdf

Formatted: Font: (Default) Times New Roman

Formatted: Default, No bullets or numbering

Formatted: Font: (Default) Times New Roman, 12 pt, Not Bold

Formatted: Font: (Default) Times New Roman, 12 pt, Not Bold

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Font: (Default) Times New Roman, 12 pt, Not Bold

Formatted: Font: (Default) Times New Roman, 12 pt

Proposed Actions

During 2015 and 2016

Action Item #1

Commitments for research in 2015 and planned for 2016. In order to have a better understanding of ongoing research commitments and to multi-year investments in science and research for rangeland fire, invasive plants, greater sage-grouse conservation, and sagebrush management ~~and conservation~~, a request will be sent to all federal agencies inquiring about research funded in 2015 and any planned funding commitments for 2016. Information that will be requested will include research title, management questions, lead agency, Principal Investigator, collaborators, description of the project, funding commitment, and completion date.

Responsible Parties: USGS, BLM, FWS, NPS, USFS, NRCS

Target: May 30, 2015

Action Item #2

Cross-walk existing research prioritization and strategy efforts to identify science needs for the Great Basin. As identified in the Actions Underway section ~~of this task~~, several research needs and strategy analyses have been completed. A cross walk of these efforts will be ~~done~~ carried out to extract common priority issues that are focused on fire and invasive species science needs in the Great Basin. This process will result in a unified set of research priorities for use by the land management and research community in guiding future funding decisions. Specific actions necessary to complete this task include:

- Identify all recent and relevant research needs and strategy documents.
- Conduct a ~~document~~ literature review to identify science needs relevant to fire and invasive plants in the Great Basin.
- Crosswalk individual needs across all documents to identify common topics and subject areas.
- Organize the range of science needs into themes that align with management needs.

Responsible Parties: USGS lead in collaboration with appropriate federal agencies

Target: August 30, 2015

Action Item #3

Develop an actionable science plan of prioritized research needs. Building on the crosswalk developed in Action #2, a science action plan will be developed following these steps:

- An initial prioritization of research needs based on management needs will be ~~done~~ completed by a focus group of inter-agencies representatives from state and federal agencies.

- Additional input on the initial prioritization will be sought through a survey tool shared with state and federal agencies and tribes in the Great Basin.
- Final prioritization will be accomplished ~~done~~ based on input through the survey tool and input from DOI and Bureau leadership.
- Using the final prioritization, an action plan will be developed that identifies specific science and research efforts to address the highest priority needs.
- A budget plan will be formulated on how to complete the priorities that takes into consideration funding needs, sources, projected timelines, and needed outcomes.

Responsible Parties: USGS lead with an interagency team of appropriate federal, state, and tribal representatives

Target: January 30, 2016

Action Item #4

Comment [DMD3]: Cross-walk this with 7b(vi) – Improving the delivery and application of science

Develop or identify a single online science delivery system to allow easier access to published science products and other science information. [Comments about other systems] The Joint Fire Science Program is funding the Great Basin Fire Science Exchange (GB Exchange). The specific purpose of this regional exchange is to facilitate the use of science in land management applications. The GB Exchange is currently engaged in sharing information on habitat restoration, fuels treatments, post fire management, and landscape assessment and prioritization. The GB Exchange provides a forum where Great Basin land managers can identify technical needs with respect to fire, fuels, and post-fire vegetation management; develops and synthesizes necessary information and technical tools to meet these needs; provides the necessary information and tools through venues most preferred by field staff, field office managers, and higher administrative levels; and develops direct lines of communication between managers and scientists. The GB Exchange has an existing website (http://www.gbfiresci.org) archiving bibliographies, webinar presentations, discussion forums, models and tools as well as a calendar of upcoming events.

Since the GB Exchange is already meeting some of the needs for a science delivery system, it is in the best position to be expanded to meet needs of the Order. Specific actions to expand the GB Exchange include:

- Identify existing gaps in currently archived information about fire, invasive plants, ~~sage~~ sage-grouse, and the management of sage-brush habitats.
- Identify other information sources and provide active links (e.g., GBLCC, GBRMP), so as to assure managers complete access to relevant science and land management information.
- Establish a process to facilitate transfer of relevant research products from applicable agencies and organizations through the GB Exchange.

- Adapt the current website structure to provide a discrete section supporting the Order and to facilitate delivery of relevant research on sage-grouse and sagebrush.
- Educate/training bullet Enhance the transfer and dissemination of new science, methods, and decision support tools via targeted training events at events focused on Great Basin issues (e.g., Great Basin Consortium).

Responsible Parties: Joint Fire Science Program – GB Exchange in collaboration with other affected federal and state agencies.

Target: September 30, 2015

Action Item #5

Define a process for executive leadership engagement in supporting prioritized science needs. Executive leadership engagement and support will be ~~needed~~ necessary to maintain long-term commitments to science research and delivery. This can be accomplished with existing senior leadership ~~groups~~ or by a newly created group for the Great Basin and the Order. An alternative considered recently is to establish a Great Basin interagency team through the Western Governors Association (WGA) Sage-Grouse Task Force or the National Sage-grouse Executive Oversight Committee (EOC) to serve as a forum for executive leadership engagement in science needs and commitments for the Great Basin. This group could serve in a larger role for Great Basin leadership (i.e., Great Basin EOC), but also addresses the need for senior leadership engagement in science commitments. Components of this action may include:

- Determine whether a longer-term leadership group will be created for the Order or whether pursing development of a Great Basin EOC will fill the need.
- If the latter, a proposal ~~on creating~~to create a Great Basin EOC and Technical Team will be prepared and presented to the range-wide EOC and/or the WGA Sage-grouse Task Force. This proposal will need to consider:
    - Assembling an interagency technical team to provide technical support to the policy team, including identifying research and monitoring needs in direct support of resource management issues.
    - Assembling an interagency policy team (EOC) with senior leaders from the federal (FWS, BLM, USGS, NRCS, and USFS) and state agencies from the Great Basin states to target funding to address priority needs with a goal to support cross agency funding collaborations and commit to multi-year investments in science and research.

Responsible Parties: USGS, BLM, FWS, USFS, NRCS, and in collaboration with state agency administrators.

Target: September 30, 2015

Action Item #6

Identify funding sources to support the action plan, and develop a plan for a funding initiative in 2017. As part of a comprehensive science action plan, the Department and bureaus will need to plan for its' implementation through a commitment to long-term budgeted activities. In ensuring the durability of the action plan, the following steps will be taken:~~.~~

- Building on Action Item #1, the federal agencies will develop a working, unofficial budget crosscut of all ongoing research activities in the Great Basin. This effort can be conducted in parallel with tasks identified in Section 7b(vi).
- Activities identified in the action plan should be cross-walked with closely related programs identified in the crosscut to help best determine where future science activities could be most efficiently and effectively located.
- A budget plan will be formulated to complete the prioritized needs in the action plan that identifies funding sources and opportunities for ~~cost~~ cost-sharing across agencies.
- An annual unified (cross bureau) budget request will be developed that identifies gaps in funding needed to support the action plan. The budget request should identify: (1) funded projects set to expire; (2) existing project funding that should be rolled-over and budgeted in new fiscal years; and (3) any needs for new funding to implement the plan. The budget request should be provided to appropriate bureaus in a timely manner for consideration in bureau budget formulation prior to submission to the Department.
- Bureau Science Advisors, the DOI Science Coordinator, and other identified senior level policy leads will be engaged, as appropriate, to convey budget needs in implementing the strategy.

Responsible Parties:

Target:

Actions Beyond 2016

Longer term actions:

Monitor treatment effectiveness and landscape change – Policies and funding are needed to ensure that: (1) long-term monitoring is conducted to assess treatment effectiveness and landscape changes due to development, land use, and climate change, (2) appropriate data management, assessment, and reporting occurs, and (3) an adaptive management framework is used.

Climate change – Define and utilize a process for regularly accessing and translating the most recent advances in climate science. Involve the USGS Climate Science Centers and USFS Climate Science Hubs and the Landscape Conservation Cooperatives in applying these advances

to the findings and interpretation of the science and monitoring initiated from the proposed action~~this~~ plan.

Science Synthesizes – ~~Develop synthesizes on~~Synthesize literature on fire and invasive plants, and how they relate to greater sage-grouse and sagebrush to assist land managers with the integration of science and land and species management applications.

Action Plan Updates – To stay current, the action plan will need to be reviewed and updated every five years. This update should take the form of reviewing priorities to identify emerging science and to determine if new technological innovations~~new issues~~ have arisen and if management priorities have changed.

DOI Peer Review/Science Integrity Policy – Develop a Departmental peer review policy and scientific integrity guidance to ensure consistency across Bureaus.