Secretarial
Order 3336
A Set of Longer Term Actions and Activities

DRAFT FOR TRIBAL & STAKEHOLDER COMMENT
4/1/2015
April 1, 2015

Dear Reader,

The Secretary of the Interior signed Secretarial Order 3336 – Rangeland Fire Prevention, Management, and Restoration (the Order) on January 5, 2015, emphasizing the need to give greater attention to the threat of rangeland fire across the West as a critical fire management priority for the Department. The Order set in motion work to enhance policies and strategies for preventing and managing rangeland fire and for restoring sagebrush landscapes impacted by fire across the West.

Since the issuance of the Order, nine interagency task groups worked collaboratively with other Federal, tribal, state, and local governmental partners and stakeholders to develop and publish: 1) the Implementation Plan, which established the approach to accomplish the nine actions outlined in Section 7(b) of the Order; and 2) The Initial Report – A Strategic Plan for Addressing Rangeland Fire Prevention, Management, and Restoration in 2015 (Initial Report) that identified actions and activities to be implemented prior to the onset of the 2015 Western wildfire season.

Since the acceptance of the Initial Report, the task groups have worked to identify and recommend actions and activities to be implemented during the remainder of 2015, 2016, and beyond. This document includes the draft proposed actions developed by the task groups, drawing upon shared experience and success of addressing rangeland fire to date, as well as the broader wildland fire prevention, suppression, and restoration efforts including The National Cohesive Wildland Fire Management Strategy and the recommendations from The Next Steppe: Sage-grouse and Rangeland Fire in the Great Basin conference held in Boise, Idaho, the first week of November 2014.

We request comments and recommendations for improving this strategy from tribes, the affected states, our partner agencies, and interested stakeholders by April 21, 2015, as we prepare the Final Report for Secretary Jewell.

Members of the Rangeland Fire Task Force
U.S. Department of the Interior
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Approach

The Implementation Plan, published on February 1, 2015, identified nine task groups to address the various elements identified in Section 7(b) of the Order. Each group used the approach defined in the Implementation Plan to recommend longer-term actions and activities for inclusion in the Final Report. In short, the common approach included:

- **Guiding Principles and Overarching Expectations** - use of the 10 elements of Section 5 of the Order as guiding principles and Section 6 as overarching expectations;
- **Collaboration with partners and stakeholders** – as outlined and defined in Section 6c of the Order; and
- **Tribal Consultations and Stakeholder Engagement** – use a series of listening, sessions, conference calls, and government-to-government consultations with tribal leadership, the relevant states, and interested stakeholders to gain feedback throughout the process of developing the reports associated with the Order.

Several of the longer-term actions and activities proposed in this draft report build on the short-term activities, identified in *The Initial Report: A Strategic Plan to Addressing Rangeland Fire Prevention, Management, and Restoration in 2015* (Initial Report), for implementation prior to the onset of the 2015 Western wildfire season. These previously approved actions and activities, currently underway, are reflected in Appendix A of this report for your convenience and reference.

Notes:

1. All dates refer to calendar year quarters (First quarter: January – March; Second quarter: April – June; Third quarter: July – September; and Fourth quarter: October – December).
2. Responsible parties are the individuals or organizations responsible and accountable for taking the actions identified.
3. This document is a rough draft of actions and activities, proposed by the nine task groups, and intended for review and comment by interested tribes, our partners, and interested stakeholders. This document does not represent the full final report. *The Final Report: An Integrated Fire Prevention, Management and Restoration Strategy* will be prepared after careful consideration of all comments and recommendations received during the comment period from April 2 through April 21, 2015.

Section 7(b) i. – Integrated Response Plans

**Issue Description/Overview**

*Design and implement comprehensive, integrated fire response plans for the Fire and Invasives Assessment Tool (FIAT) evaluation* and other Great Basin areas that prioritize
protection of low resilience landscapes most at-risk to detrimental impacts of fire and invasives.

Agencies will apply a risk-based, cross-boundary approach to wildland fire response planning and preparedness by incorporating rangeland fire suppression priorities into the revision of Fire Management Plans (FMPs), Land Use Plans (LUPs), and update computer assisted dispatch (CAD) systems. Although the Order identifies protecting, conserving, and restoring the health of the sagebrush-steppe ecosystem as a critical fire management priority for the Department of the Interior (Department or DOI), it does not reprioritize the protection of the ecosystem over the safety of the public and firefighters. Our priorities remain consistent with the Guidance for Implementation of the Federal Wildland Fire Management Policy, dated February 13, 2009, and those outlined in the Order. The safety of the public and our firefighters remains paramount.

Actions and activities relevant to this section for implementation prior to the onset of the 2015 Western fire season include:

- Increase the capabilities and use of rural/volunteer fire departments and Rural Fire Protection Agencies (RFPAs) and enhance the development and use of veteran fire crews.
- Ensure local, multi-agency coordination (MAC) groups are functional, and MAC plans are updated.
- Develop and implement minimum draw-down level\(^1\) and step up plans\(^2\) to ensure availability of resources for protection in priority greater sage-grouse habitat.
- Apply a coordinated, risk-based approach to wildfire response to assure initial attack response to priority areas.
- Develop a standardized set of briefing materials.
- Review and update local plans and agreements for consistency and currency to ensure initial attack response to priority greater sage-grouse areas.
- Develop supplemental guidance for the use of “severity funding\(^3\).”
- Evaluate the effectiveness of action plans.
- Increase the availability of technology and technology transfer to fire management managers and suppression resources.

\(^1\) The minimum level of personnel and equipment resources needed (at either the local or national level) without compromising response capability.
\(^2\) Step-up plans, (also called staffing plans), are designed to direct incremental preparedness actions in response to increasing fire danger.
\(^3\) Suppression funds used to increase the level of pre-suppression capability and fire preparedness when predicted or actual burning conditions exceed those normally expected, due to severe conditions.
• Improve the description and awareness of critical resource values threatened in various stages of the fire response process including large fire management.

• Ensure compliance and evaluation of the implementation plan action items.

**Proposed Actions**

Longer-term actions will begin in 2015, with full implementation in subsequent years, to improve program effectiveness and efficiency and reduce costs include:

**Action Item #1**

*Enhance protection of the sagebrush-steppe from wildfire.* Update FMPs to include sagebrush-steppe conservation and restoration efforts, include relevant FIAT components, LUP goals and objectives, and identified FIAT suppression priority areas.

*Responsible Parties:* Local Unit Fire Management Officers (FMOs); reviewed by State/Regional Fire and Aviation staffs.

*Target:* Second Quarter 2017

**Action Item #2**

*Increase the availability of technology and technology transfer to wildland fire managers and resources by completing a National Strategic Plan, with implementation starting in 2016.* Building on a recommendation included in the Initial Report (see Appendix A), provide access to real time maps, information, and data increases the success of suppression resources responding to the wildfire threats, including priority greater sage-grouse habitat. Agencies should make available the most current hardware and software and increase the rate of radio system upgrades to improve availability.

*Responsible Parties:* DOI national bureau leadership, DOI state/regional and local unit managers

*Target:* Second Quarter 2016

**Action Item #3**

*Improve the description and awareness of critical resource values threatened in various stages of the wildfire response process including large wildfire management.* Improve the collection of information about critical resource values threatened, including greater sage-grouse habitat and populations, by including a specific block for this purpose on the existing Incident Status Summary (ICS 209) and by ensuring that this information is captured in the Incident Management Situation Report (SIT Report).

*Responsible Parties:* National Interagency Coordination Center (NICC), Predictive Services with direction from the NICC governance board
Action Item #4

Improve initial attack capabilities in FIAT designated states (Idaho, Nevada, Oregon, California and Utah) by increasing suppression equipment (dozers, engines and aircraft). The Bureau of Land Management (BLM) will complete an initial attack assessment/decision tool that identifies the best mix of resources in the FIAT states and the other BLM states. This tool will be used to assist in making decisions on budget and resource allocation in the FIAT states for implementation in 2016. Data and information from the FMP updates identified in Action Item #1 will also be used to inform the decision process, as they are completed.

Responsible Parties: BLM national leadership

Target: Second Quarter 2016
Section 7(b) ii. – Prioritization and Allocation of Resources

Issue Description/Overview

Provide clear direction on the prioritization and allocation of fire management resources and assets.

Prioritization and allocation of fire management resources takes place on multiple scales by the “organizational owners4” of the resources and assets, both within the individual organizations and in coordination and collaboration with each other. Those organizations prioritize assets and resources prior to incidents through pre-incident response plans (often known as “run cards”), and make determinations to retain certain resources and assets for local use only and identify those available for assignment to other locations. MAC groups, or the equivalent, composed of agency managers, set guidelines and parameters for response (mobilization guides), including priorities and criteria for allocation of resources and assets.

At the national level, the National Multi-Agency Coordinating (NMAC) Group prioritizes allocation of resources and assets among the nine geographic areas, as identified by the NICC. Geographic Multi-Agency Coordinating (GMACs) Groups prioritize allocation of resources and assets among fires within their respective geographic areas. Overall, agency fire management policies guide priorities for allocation of wildland fire management resources and assets. “Direction to leaders” documents – issued by national agency leadership—typically set national priorities. Command responsibility for each incident lies with the local line officer or agency administrator, usually through a delegation of authority to an incident commander.

The Order places added emphasis on the need to protect, conserve, and restore the health of sagebrush-steppe ecosystem by emphasizing that this is a critical fire management priority (see Section 4 of the Order).

In preparation for the 2015 western fire season a number of actions are underway to address the prioritization and allocation of wildland fire management resources:

- Develop a communication plan to establish protocols for providing Federal agency leadership with regular briefings and information on wildfire activity, fire conditions, and significant issues in relation to rangeland fire and the implementation of the Order throughout the 2015 wildfire season;
- Review and update the delegation of authority for the NMAC Group;
- Issue a national level “Leaders’ Intent;”
- Engage GMAC Groups;
- Develop “Delegation of Authority” template for use by local line officers; and

4 Organizational Owner is the organization (Federal, state, or local) that funds the resource
• Engage line officers to communicate Leaders’ Intent and expectations.

**Proposed Actions**

Beginning in 2015, specific actions (identified below) will be initiated to improve utilization of fire management resources and assets in relation to rangeland fire and increase efficiency and reduce costs.

**Action Item #1**

*Reduce administrative barriers.* Identify and initiate actions to reduce administrative barriers (e.g., the lack of a travel credit card for fire crews limits the expeditious assignment and reassignment of fire personnel resources from one incident to another) that adversely affect the mobility of rangeland fire resources and assets.

**Responsibility:** Wildland fire leadership groups will identify barriers and propose recommended solutions; agency leadership takes appropriate action to remove or mitigate the barriers.

**Target:** Second Quarter 2016

**Action Item #2**

*Enhance predictive services and fire intelligence capabilities to anticipate, plan for, and utilize firefighting resources and assets.* Develop and enhance tools to determine and understand expected rangeland fire conditions (e.g., weather and fuels). Improve analytical ability to acquire, pre-position, and mobilize firefighting assets to effectively prepare for and respond to the increased threat of wildland fire, with priority given to rangeland areas.

**Responsibility:** Fire Management Board (FMB), in concert with non-federal partners, develops recommendations for enhancing predictive services capabilities. Fire Executive Council (FEC), in concert with non-federal partners, provides direction, implementation, and oversight.

**Target:** Second Quarter 2016; additional enhancements in future years.

**Action Item #3**

*Engage international and Department of Defense (DoD) partners.* Update and strengthen existing arrangements to utilize skills, assets, capabilities, and build capacity through the use of international and DoD partners to supplement domestic Federal and non-federal wildland firefighting capabilities. Complete and implement updated international agreements with Mexico, Australia, and Canada. Review, update, and expand agreements and protocols with the DoD to utilize a wide range of capabilities including information and intelligence gathering and analysis, ground and aviation assets, and personnel.
Responsibility:

- International agreements: DOI Office of Wildland Fire (OWF) and U.S. Forest Service (USFS) Fire and Aviation Management (FAM), working with appropriate legal and international affairs program offices.

Department of Defense agreements: National Multi-Agency Coordinating (NMAC) Group develops requirements. DOI OWF and USFS FAM work with Department of Defense to determine appropriate mechanisms.

Target:

- International Agreements: Fourth Quarter 2015

Action Item #4

Improve cooperative agreements between Federal, tribal, and state entities. Review, revise, and update the approach to cooperative wildland fire management (WFM) agreements to improve the utility of those agreements to ensure that interagency wildland firefighting resources and assets are available to meet priorities.

Responsibility: FEC, in coordination with non-federal partners, provides direction and oversight. National Wildfire Coordinating Group (NWCG), and FMB, in coordination with non-federal partners, develop appropriate templates, guides, and protocols for cooperative agreements.

Target: Second quarter 2016, with continued improvement in future years.

Action Item #5

Improve management of the radio spectrum. Develop mechanisms for better management and allocation of radio spectrum during peak use.

Responsibility: FEC provides direction and oversight. NWCG and FMB, in coordination with Federal agency chief information officers (CIOs), identify requirements and options for improving spectrum management. CIOs are responsible for establishing appropriate mechanisms and protocols.

Target: Second quarter 2016, with continued improvement in future years.

Action Item #6

Enhance ability of communities to provide local protection. Pursue opportunities within existing and future Federal wildland fire management budgets for providing technical assistance to communities. Assistance may take the form of firefighting capability, fuels management, and/or fire prevention. Through implementation of the National Cohesive Wildland Fire
Management Strategy, the Department, working together with the USFS and other Federal and non-federal partners, will support the goal of creating fire-adapted communities and give added emphasis to opportunities to enhance local efforts to significantly reduce wildfire risk in priority sage-steppe areas. We will explore funding options to support those opportunities.

**Responsibility:** OWF, BLM, Interior bureaus, and USFS wildland fire management programs, and the Wildland Fire Leadership Council (WFLC).

**Target:** Third Quarter 2015 and ongoing

**Action Item #7**

**Address the state and private areas without previously defined protection responsibilities.**

Defining protection responsibility for all lands provides a greater level of assurance that appropriate, effective fire response takes place. Designation of appropriate protection responsibility is primarily a responsibility of state and local governments. Federal agencies may be able to assist with technical advice or other support.

**Responsibility:** The Department and the USFS will work with state and local governments to assist with resolving and defining protection responsibilities across all lands.

**Target:** Ongoing

**Action Item #8**

**Expand capabilities of tribal, state, and local agencies to provide fire protection.** Pursue opportunities within existing and future Federal wildland fire management budgets to expand capabilities of tribal, state, and local agencies provide fire protection, particularly when such protection is of direct benefit to Federal protection responsibilities. Examples of expanded capabilities include training, equipment, and technical assistance. The Department will identify opportunities to enhance tribal, state, and local fire protection capabilities in priority sage-steppe areas and give added emphasis in the allocation of funding and other resources to support those opportunities.

**Responsibility:** OWF and Interior bureaus and USFS wildland fire management programs

**Target:** Ongoing

**Action Item #9**

**Develop a mechanism to capture and analyze data regarding wildfire impacts to priority sagebrush-steppe ecosystems.** Currently, some data are collected through the ICS 209 incident reporting form and other means. However, the existing ICS 209 is designed to prioritize fires and create situation reports. Agencies have no systematic means for organized collection, analysis, and use of the data to understand the impacts of wildfire and to mitigate those impacts. A mechanism to improve collection, analysis, and use of this information will be developed,
starting with identification of business/user requirements to design appropriate tools to capture, collect, and analyze the necessary data.

**Responsibility:** OWF with support from Department bureaus (fire and non-fire programs), the USFS, and non-federal partners

**Target:** Second quarter 2016, continued improvement in future years
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Section 7(b) iii. – Fuels

Issue Description/Overview

Expand the focus on fuels reduction opportunities and implementation.

The Secretarial Order emphasizes application of risk-based, landscape-scale approaches for fuel treatments; monitoring and adaptive management related to fuel treatments; and opportunities to expedite processes, streamline procedures, and promote innovations in fuels management.

Fuels management in the sagebrush-steppe ecosystem involves many stakeholders, including Federal agencies, states, tribes, county and local governments, cooperators, and private land owners. For fiscal year (FY) 2016 and beyond, the Department will implement a risk-based allocation approach that will increase our preparedness and fuels capacity in relationship to implementing the Order. Each stakeholder must maintain sustained collaboration efforts to achieve these action items over time understanding these are multi-year investments and commitments.

The actions described in this chapter are the first steps toward achieving efficiencies, promoting collaboration, and eliminating barriers in fuels management actions. These actions support the need for increased capacity, staffing, and funding to continue to implement projects at the local/landscape scale that will ultimately lead to increased health of our nation’s sagebrush-steppe ecosystem.

Actions currently underway include:

- Collaborative efforts that address fuel treatments that serve as the building blocks for many of the actions identified in the sections below (e.g., The National Cohesive Wildland Fire Management Strategy; DOI’s Landscape Conservation Cooperatives [LCCs] and Resilient Landscapes [RL]; USFS’s Collaborative Forest Landscape Restoration Program [CFLRP]; BLM’s Healthy Lands and FIAT; and The Nature Conservancy’s Fire Learning Networks [FLNs]). The 2014 passage of The Farm Bill also includes the Good Neighbor Authority that provides for restoration work to occur across state and Federal boundaries. These national and regional efforts have resulted in numerous localized efforts that have a long history of collaboration among Federal agencies, states, tribes, and stakeholders.

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5 RMRS-GTR-326: Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: A strategic multi-scale approach

6 Candidate Conservation
Proposed Actions

Action Item #1

Identify fuels management priorities. Identify priority landscapes and fuels management priorities within landscapes. Continue to refine and assess criteria for determining fuels management investment priorities by applying resistance and resilience concepts; use the results from the initial FIAT assessments to evaluate prioritization methods and include the definition of conditions where fuel treatments will not sufficiently support protection, conservation, and restoration of sagebrush-steppe ecosystems.

a. Land management agencies will collaboratively develop consistent criteria across agencies and private lands to identify priority landscapes, and expedite planning and implementation of fuel treatments in the initial FIAT assessment areas.

**Responsible Party:** BLM will lead, in coordination with USFS, Natural Resources Conservation Service (NRCS), U.S. Fish and Wildlife Service (FWS), state agencies, counties, and private landowners

**Target:** Third Quarter 2015, continued improvements in subsequent years

b. Propose methods for initiating FIAT-like assessments outside of the Great Basin that will result in priorities for fuels management.

**Responsible Party:** BLM will lead, in coordination with the USFS, and the Western Association of Fish and Wildlife Agencies (WAFWA)

**Target:** First Quarter 2016, continued improvements in subsequent years

Action Item #2

Apply efficient National Environmental Policy Act (NEPA) processes for fuels management actions.

Make efficient use of NEPA processes to allow for shorter planning times in conducting analysis of projects at a landscape scale; explore opportunities for streamlining NEPA compliance.

Initiate one or more programmatic NEPA processes in the FIAT assessment areas for landscape-level fuel treatments and restoration and apply streamlining tools (e.g., tiering and incorporation by reference) and ensure maintenance of fuel treatments is analyzed.

**Responsible Party:** All Federal land management agencies, in collaboration with the Council on Environmental Quality (CEQ)

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**Target:** Third Quarter 2016

**Action Item #3**

*Convene a working group to develop common interagency metrics to define success related to fuels management activities in sagebrush-steppe ecosystems and improve techniques to ensure fuels management is most effective in protecting, conserving, and restoring sagebrush-steppe.* Metrics could consider priority metrics associated with Candidate Conservation Agreements (CCAs), habitat protected/restored, cost-avoidance, etc. Metrics should be consistent with those developed to provide for monitoring and evaluation of greater sage-grouse land use plans and implementation of adaptive management strategy. Develop these metrics in coordination with the science/research needs described in the *Joint Fire Science Program (JFSP) Fuel Treatment Science Plan*. Tier these metrics into larger fuels management effectiveness monitoring to understand how fuel treatments are meeting diverse priorities in the context of ecosystem structure, function, and resilience. Consider these metrics in adaptive management.

**Responsible Party:** USGS, Federal land management agencies, JFSP, interested tribes, and non-federal partners (e.g., states, non-governmental organizations [NGOs], grazing associations, and members of Candidate Conservation Agreements with Assurances and Candidate Conservation Agreements)

**Target:** Convene before end Fourth Quarter 2015, metrics and guidance developed by end of the First Quarter 2016

**Action Item #4**

*(Note: This action is also addressed in 7(b) iv.)*

*Review and update current best management practices (BMPs) for rangeland fuel treatments.* Review and update BMPs for rangeland fuel treatments to better integrate resistance and resilience concepts, ecological resilience science, and to identify a specific suite of preferred design alternatives for fuel treatments in sagebrush-steppe.

**Responsible Parties:** BLM will lead, with agency specialists (BLM, USFS, and NRCS fuels managers, wildlife, range/vegetation, research scientists with fuel treatment experience), scientific community representatives, and non-federal partners (WAFWA, Western Governors’ Association [WGA] representatives, other NGOs).

**Target:** Assessment of BMPs to be completed by end of Third Quarter 2015; BMPs will be updated and report prepared by end Third Quarter 2016.

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8 Candidate Conservation Agreements are formal agreements between the FWS and one or more parties to address the conservation needs of the proposed or candidate species, or species likely to become candidates, before they become listed as endangered or threatened.
Action Item #5

*Coordinate the development of effective landscape-level fuel treatment plans for Federal land management agencies in collaboration with tribes and private, state, and county partners and interested stakeholders.*

Improvements are needed in 1) developing better vegetation dynamics in non-forest systems, 2) better characterization of sagebrush-steppe fuels, treatment actions, effects, and associated changes in potential fire behavior, and 3) linkages between fuels and habitat quality for key species, and 4) developing economic models (such as avoided cost) to describe the cost-effective return of investments. To ensure progress in this area, new development in integrated modeling systems, either building off current systems or building new ones, is needed.

    a. Initiate a pilot project to test existing tools and/or prototype versions of new tools.

*Responsible Party:* BLM and USFS - Research, Development and Analysis (RD&A) initiate pilot project to test Interagency Fuels Treatment – Decision Support System (IFT-DSS) and other systems, in coordination with NRCS. Additional pilot projects may be developed and led by other agencies and organizations.

*Target:* Results from initial pilot project by Fourth Quarter 2015; additional pilot project(s) to be initiated in the First Quarter 2016.

    b. Use results from pilot project(s) to make improvements in models and identify appropriate tools for developing strategies for future landscape-level fuel treatments in sagebrush-steppe ecosystems.

*Responsible Party:* USGS and USFS (RD&A) to co-lead, in coordination with NRCS, DOI land management agencies, and USFS - National Forest Systems (NFS).

*Target:* Core capabilities developed by end of Third Quarter 2015; reviewed completed by end of Third Quarter 2016; and recommendations to the FMB by end of First Quarter 2017.

Action Item #6

*Enhance training to reinforce the fuels management program’s role in protecting and conserving and restoring sagebrush-steppe.*

    a. Review existing preparedness (e.g., Wildland Fire Decision Support System [WFDSS] decisions), prescribed fire⁹, and training materials to identify opportunities to enhance sagebrush-steppe ecosystem concepts and priorities. Revise selected training materials.

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⁹ Any fire intentionally ignited by management actions in accordance with applicable laws, policies, and regulations to meet specific objectives.
Responsible Party: To be determined (TBD); possibilities include National Advanced Fire and Resource Institute (NAFRI), NWCG, Great Basin Training Unit, JFSP, and Great Basin Science Exchange.

Target: End of Third Quarter 2016

b. Develop curriculums, and deliver fuels management training specific to planning and implementing fuels management and restoration actions in sagebrush-steppe ecosystems. This training would include science-technology transfer components to increase probability for success in achieving desired post-treatment conditions.

Responsible Party: BLM to lead with USFS and FWS, working with JFSP and NGO/universities to develop training.

Target: Training developed by the First Quarter 2016 to be delivered in 2016-17.

c. Develop training to enhance monitoring (effectiveness and implementation) of fuel treatments. Training would be compatible with agencies’ monitoring protocols.

Responsible Party: USGS to lead, with BLM, USFS and FWS

Target: Training developed in Fourth Quarter 2015, to be rolled out in 2016-17

Action Item #7

Identify (and make known to Federal agencies, tribes, states, and key partners) available Federal funding tools for work within and outside of Federal agencies to implement fuel treatments across jurisdictions, on Federal, tribal, state, and private lands. Tools may include: Stewardship Contracting, Wyden Amendment, Sikes Act, Service First, NRCS Programs, Interagency Agreements, Good Neighbor Authority, etc.

Responsible Party: DOI OWF to lead, in partnership with DOI agencies and USDA (USFS, NRCS), state foresters, RFPAs, and counties.

Target: Content updated by end of Third Quarter 2015

Action Item #8

Leverage and expand current collaborative landscape restoration efforts that integrate partnership interactions among Federal, tribal, state, and local governments and NGO collaborators, and expand local and smaller projects into landscape scale efforts. Examples of programs include: DOI-Resilient Landscapes (RL) and BLM’s Healthy Lands program; and USDA-Joint Chiefs’ Initiative, USFS-Collaborative Forests Landscape Restoration Program, and the Good Neighbor Authority.

Develop projects to demonstrate the value of collaborative landscape restoration/fuels management programs in the sagebrush-steppe.
**Responsible Party:** Parties developing landscape restoration/fuels management programs

**Target:** As programs are developed

**Action Item 9**

Promote and showcase collaborative landscape-scale fuels management projects. Post success stories on the [Rangeland Management webpage](#).

**Responsible Party:** BIA, BLM, USFS, FWS, National Park Service (NPS), NRCS, state/local governments, and RFPAs

**Target:** Ongoing

**Action Item #10**

Expand technical support and incentives for livestock producers to voluntarily implement targeted fuel treatments as part of strategic, landscape efforts to protect, conserve, and restore sagebrush-steppe habitats. Evaluate results of FIAT planning efforts to identify priority landscapes and opportunities to further engage private landowners and permittees in implementing fuels and restoration treatments. BLM and NRCS will collaboratively identify priority landscapes where NRCS Sage-Grouse Initiative technical and financial assistance can be targeted on private lands to compliment public land fuel treatments to effectively address threats. In response to interest from private landowners and grazing permittees, BLM and FWS to support the development of Candidate Conservation Agreements with Assurances (CCAA) on private lands and the Candidate Conservation Agreements (CCA) for Federal lands that provides for livestock grazers, where feasible, with the ability to voluntarily implement actions (fuel treatments) to reduce threats to greater sage-grouse in sagebrush-steppe habitat.

**Responsible Party:** BLM, FWS, USFS, NRCS, Soil and Water Conservation Districts, private land owners, states, counties, and RFPAs

**Target:** Evaluate opportunities for livestock producer engagement in FIAT priority project areas in Fourth Quarter 2015 and 2016. Expand assistance/incentives to producers and permittees in priority landscapes in 2016 – 2017.

**Action Item #11**

Utilize risk-based, landscape-scale approaches to identify and facilitate investments in fuel treatments and restoration in the Great Basin. Risk-based assessments will consider sagebrush-steppe values and FIAT priorities and other values/priorities, incorporate adaptive management principles, and are science-supported.

a. Bureaus manage their allocations.

**Responsible Party:** DOI-OWF

**Target:** For Fourth Quarter 2015 allocations to bureaus
b. DOI agencies to apply a risk-based approach to allocate fuels management program to units that facilitate investments in fuel treatments and restoration in the Great Basin. 

**Responsible Party:** DOI fire management agencies

**Target:** For Fourth Quarter 2015 and First, Second, and Third Quarters of 2016 allocations

**Action Item #12**

*Explore and support state and local authorities for implementation for fuel treatments on non-federal lands in greater sage-grouse habitat* by encouraging incentives for work done on non-federal lands to implement landscape resiliency projects. The Department will suggest a resolution to WFLC to explore authorities with state and county collaborators.

**Responsible Parties:** DOI-PMB with National Association of Counties (NACo) - Western Region, WGA and states, WFLC, Western State Foresters, etc.

**Target:** Discuss and propose next steps at Fourth Quarter 2015 WFLC meeting.

**Action Item #13**

*Develop criteria and methods for reducing fine fuels through targeted grazing methods to diminish fire risk in priority sage-grouse areas.* For example, during seasons with above-normal winter and spring rainfalls, utilize more targeted grazing methods to reduce fine fuels adjacent to priority habitats. Targeted grazing would be a cooperative engagement on both private and Federal lands. Utilization rates on cheatgrass-infested areas on Federal lands may exceed Animal Unit Month (AUM)’s on existing grazing allotments to achieve this effective fuels reduction method.

**Responsible Party:** BLM to lead in coordination with Federal agencies, states, counties, and private landowners.

**Target:** Agreements and standards in place for utilization by Third Quarter, 2017

**Action Item #14**

*Identify and prioritize science needs related to fuels management actions in sagebrush-steppe.* Review the existing reports such as *The National Cohesive Wildland Fire Management Strategy National Science Report*, *JFSP Fuel Treatment Science Plan*, the *Sage-Grouse National Technical Team Report*, etc. Identify sources of funding and capacity to meet science needs. Suggest to JFSP a new or modified line of work to address priority science needs.

**Responsible Party:** USGS, Federal and state land managers, and JFSP

**Target:** For Third Quarter 2015, JFSP proposal solicitation; and by end of Third Quarter 2016 and 2017, new or modified line of work to address priority science needs.
Section 7b (iv) - Fully Integrate Emerging Science

**Issue Description/Overview**

*Use emerging scientific knowledge on ecological resistance and resilience in design of future management actions. Integrate ecological resilience science into design and implementation of land management actions for habitat and fuels management and restoration projects.*

Resilience and resistance concepts provide a unifying framework for evaluating ecosystem responses to disturbance and potential management actions at multiple scales. These concepts originated in the 1970’s, are increasingly used to describe societal goals and management objectives, and can be used for, “conserving habitat for the greater sage-grouse as well as other wildlife species and economic activity, such as ranching and recreation, associated with the sagebrush-steppe ecosystem in the Great Basin region,” as identified in the Order.

Recently, a strategic approach, based on environmental factors and ecosystem attributes, was developed to evaluate relative resilience to disturbance and resistance to invasive annual grasses of sagebrush ecosystems. This approach can be used both to prioritize management actions at landscape scales and to determine best management practices at local scales (*Miller et al. 2013, 2015; Chambers et al. 2014 a, b*). The relative resilience and resistance of sagebrush ecosystems can be linked with species habitat requirements for regional conservation planning to provide sustainable habitat for sage-grouse and other sagebrush obligate species.

A Conservation and Restoration Strategy (C&R Strategy) that considers ecological resilience and includes the extent of the sagebrush-steppe should be developed, then, stepped down from the state (regional) to local level. The Greater Sage-grouse, Wildfire, Invasive Annual Grasses and Conifer Expansion Assessments (FIAT), being conducted by the BLM, USFS, states, and other partners in the Great Basin and immediate surrounds, represents a first step to such a strategy. The assessments should be extended across the sagebrush-steppe and should be refined following consideration of other resource objectives, sage-grouse brood rearing habitat, climate change, and other considerations. This C&R Strategy can be used to inform a multi-partner, multi-year program of work. Other important steps include: a) identification of emerging scientific knowledge on ecological resistance and resilience that will increase the likelihood of sustaining greater sage-grouse habitat; b) improvement of the delivery and application of this science; c) consistent management direction and Leader’s Intent to use this science; d) identification of staff training and decision support tools.

Actions currently underway include:

- Federal, state and tribal agencies are implementing processes to achieve the steps outlined above.
- Emerging scientific knowledge on ecological resistance and resilience that will increase the likelihood of sustaining greater sage-grouse habitat is being identified.
• The delivery and application of this science needs improved.
• Design and implement management actions/tools that utilize this science.
• Monitor treatment effectiveness and landscape change.

**Proposed Actions**

**Action Item #1**

*Develop a directory of tech/science transfer groups and points of contact and directory of key NEPA subject matter experts.*

Many tech/science transfer groups currently exist in the Great Basin—the Great Basin Exchange, Great Basin Research and Management Partnership (GBRMP), Great Basin Landscape Conservation Cooperative (GBLCC), Great Northern Landscape Conservation Cooperative (GNLCC), Sagebrush Steppe Treatment Evaluation Project (SageSTEP), etc. Each organization specializes in different aspects of tech transfer. In order to streamline general and NEPA-specific information sharing and accessibility to conserve/restore sagebrush habitat, we need to:

- Assemble a diverse group of managers and scientists to (1) define the audience, (2) define what we mean by tech/science transfer, and (3) determine the methods and techniques that make tech/science transfer successful (FY15)
- Expand and potentially redesign the GB Fire Science Exchange website to address the needs identified in the product evaluation, increase functionality, and ensure that it meets user needs. (FY16)
- Maintain the website and ensure the information is up-to-date. (FY15 +) through the Great Basin Fire Science Exchange

**Responsible Parties:** Joint Fire Science Program – Great Basin Exchange, in collaboration with other science providers (GBRMP, GBLCC, GNLCC, SageSTEP) and affected Federal and state agencies.

**Target:** Third Quarter 2016

**Action Item #2**

*Refine the definition and understanding of what constitutes resilient and resistant greater sage-grouse habitat and what it means to apply resilience science to decision making at the site and at a landscape scale.*

The multi-scale strategic approach recently developed provides the basis for applying resilience science to prioritize management actions at landscape scales and determine the most appropriate activities at site scales. Collaborative research and management projects designed to refine understanding of what constitutes landscape resilience for sage-grouse and other sagebrush obligate species, and of how specific management activities influence resilience at site and...
landscape scales can be used to refine how resilience science, is used by both scientists and managers.

a. **Engage key researchers and managers to test and refine the variables used to indicate resilience and the protocols used to apply resilience science.** At the scale of the landscape or region, include all species of concern whose populations are currently at risk and refine the use of the “sage-grouse habitat matrix.” At the scale of the project planning area, refine the criteria for selecting management actions.

*Target:* First Quarter 2016

b. **Develop a program of work that would lead to a conservation and restoration strategy for the sagebrush-steppe that considers ecological resilience and is refined following consideration of other resource objectives, sage-grouse brood rearing habitat, climate change, and other considerations and that can be stepped down to local levels.** Include the FIAT and plans to extend FIAT in this program of work.

*Target:* Third Quarter 2016

c. **Design and implement collaborative research and management projects based on resilience to disturbance and resistance to invasive species for the primary management operations (fire operations, fuels management, fire rehabilitation, and restoration/recovery).** Refer to Sections 7(b) vi. and 7(b) viii.

*Responsible Parties:* Federal land management and research agencies in collaboration with tribes, WAFWA, and other relevant partners.

*Target:* Varied

**Action Item #3**

**Conduct a gap analysis of science and applied research capacity and identify policy needs.** In order to provide land management practitioners and the science community an opportunity to address the highest priority research needs, a multi-agency gap analysis will be necessary to evaluate research capacity and policy recommendations to help better manage the wildfire and invasives threat in the Great Basin and to ensure greater sage-grouse habitat is protected.

Components of this action may include:

- Track and support WAFWA’s efforts to evaluate the Gap analyses. Determine whether an additional gap analysis must be conducted for the Order or whether WAFWA’s efforts will fill the need.

- If the latter, provide additional resources to facilitate future meetings of the working group to further develop and expand the list of gaps. Specific actions include:
  - Reviewing the Gap Report and developing an interagency approach on how to address each gap.
Identify additional gaps and determine priorities based on the significance of the limiting factor, available funding, current work, and roles and responsibilities of supporting agencies and partners.

Responsible Parties: USGS, BLM, FWS, USFS, NRCS, tribes, and in collaboration with affected Federal and state agencies.

Target: First Quarter 2016

Action Item #4

Provide the teams established in 7(b) vi., with scale specific objective, metrics, and potential management actions for an adaptive management process that tracks the implementation of this Task including:

- Scientific peer review of objectives, monitoring design and results, and predictive modeling of management actions proposed in the Conservation and Restoration Strategy for the Sagebrush Steppe (Action Item #4) or any actions stepped down from that strategy.
- Metrics to evaluate the integration emerging science of ecological resilience into design of habitat management, fuels management, and restoration projects.

Responsible Parties: Federal land management and research agencies in collaboration with tribes, WAFWA, and other relevant partners.

Target: Report and refined program of work (POW) at end of Third Quarter 2015


Section 7(b) v. – Post-Fire Recovery

Issue Description/Overview

Review and update Emergency stabilization and Burned Area Rehabilitation policies and programs to integrate with long-term restoration activities.

Post-fire recovery includes emergency stabilization (ES) and burned area rehabilitation (BAR). These programs are intended to begin the healing process for lands that will not recover naturally when damaged by a wildfire and provide short-term funding to begin the process of restoration. Currently, resource management programs must continue the restoration process after ES and BAR.

The following topics affect the ability of the post-fire recovery programs of ES and BAR to support protection, conservation, and restoration of the health of the sagebrush-steppe ecosystem. These topics are being addressed to streamline the transition between ES and BAR and long-term restoration.

1. Lack of consistent and explicit linkage between ES treatments, BAR treatments, and efficacy of longer-term restoration treatments.

2. Whether the current ES 10 percent cap is appropriate, and whether an effective fiscally responsible alternative can be offered.

3. The current time limitations of one year for ES and three years for BAR are not based on the ecological or logistical parameters that may be faced in post-fire recovery nor do they necessarily take into consideration natural resource management priorities; therefore, under unusual circumstances, a fiscally responsible extension process should be considered.

4. Fall (seasonal) treatment windows for BAR are missed because of current delays in the prioritization process and in funding availability early in the fiscal year and because of financial management and procurement protocols.

5. Criteria for award of projects do not recognize values at risk and land/resource management priorities.

6. Effectiveness monitoring to determine if treatments succeed in the first year of application or will require multiple-year treatments, including the need for changes in post-fire restoration management practices using an adaptive management approach.

The IBAER coordinators will continue to work with the (Federal) local units, OWF, JFSP, USFS research station, and their natural resource counterparts on short- and long-term post- wildfire rangeland restoration activities to meet the objectives of the Order, with emphasis on the Great Basin region. Additional outreach to academicians and non-federal researchers and institutions with experience and expertise in landscape restoration relevant to sagebrush-steppe should continue.
A review and update of the ES and BAR policies and programs, in light of new science and information regarding resistance and resilience and the application of these concepts to sagebrush-steppe ecosystems on a landscape level, is warranted.

**Proposed Actions**

**Action Item #1**

Convene Department and bureau wildland fire and resource management leadership to determine and resolve policy, process, and allocation related changes to the ES and BAR programs to meet the goals of the Order.

*Responsible Parties: OWF*

*Target: Third Quarter 2015*

**Action Item #2**

Work with tribal and agency plant material specialist to improve efficiencies in rangeland seeding operations for ES and BAR.

Agencies will work with rangeland plant material specialist and research to determine how to improve treatment efficiencies while improving monitoring and evaluation of treatment effectiveness, including the National Seed Strategy and Implementation Plan (2015-2020) when completed, adaptive management, and engaging research.

*Responsible Parties: DOI and each bureau, with USGS on design and monitoring protocols*

*Target: Fourth Quarter 2016*

**Action Item #3**

Beginning in 2015, conduct an in-depth assessment to determine how to integrate, ES, BAR, and restoration programs and develop processes for long-term restoration commitment and maintenance of the local unit for ES and BAR treatments.

Post-Wildfire Handbook will incorporate ES, BAR, and restoration activities to obtain a desired condition, when appropriate in all post-wildfire plans. Adaptive management will be used throughout the process to determine if management activities are maintaining the trajectory toward the desired conditions.

*Responsible Parties: OWF*

*Target: April 2016*
Action Item #4

Work with the science and research community to investigate and improve the effectiveness of post-wildland fire protection, conservation, and restoration treatments, incorporating traditional ecological knowledge.

The 2015 DOI National BAER Team Preseason Meeting Webinar is scheduled for April 21 and 22 with Vegetation and Sage-Grouse Habitat Panel presentations and discussion session by research and resource personnel to inform BAER team members on current science, tools, and seeding information for post-wildfire restoration. OWF and IBAER will work with the JFSP and BLM resource lead to establish a business research line for post-wildfire recovery issues.

Responsible Parties: OWF, IBAER, JFSP, BLM, and USGS

Target: Second Quarter 2016

Action Item #5

Expand efforts to utilize native and non-native seed and vegetation plantings, where appropriate, to accelerate efforts to improve and restore post-fire rangeland health.

The Post-Wildfire Handbook will incorporate concepts from the National Seed Strategy and Implementation Plan (2015-2020) when completed to identify opportunities to improve rangeland health.

Responsible Parties: IBAER, DOI bureaus

Target: Second Quarter 2016
Section 7(b) vi. – Improve and Strengthen Interagency Coordination

**Issue Description/Overview**

Commit to multi-year investments for the restoration of sagebrush-steppe ecosystems, including consistent long-term monitoring protocols and adaptive management for restored areas. Improve and strengthen interagency coordination and organization of existing, ongoing restoration activities and take steps to expand multi-year investments within the sagebrush-steppe ecosystem.

Unbalanced coordination between various programs and agencies that fund restoration, monitoring, and adaptive management; disconnects between funding available for burned areas (ES and BAR) and longer term restoration efforts, and obstacles to durable, multi-year funding commitments to long-term projects are long-recognized problems that need to be addressed. Department’s restoration, monitoring, and adaptive management activities exist within a larger fabric of stakeholders working at local, regional, and national levels. The Department’s commitment to multi-year restoration, monitoring, and adaptive management will be more meaningful when it is a part of a larger context of commitment to the sagebrush-steppe.

The Society for Ecological Restoration defines ecological restoration as, “an intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity and sustainability” and recognizes that “restoration represents an indefinitely long-term commitment of land and resources….” At the scale of the sagebrush-steppe, “restoration interventions” should be interpreted to include:

- acquisition of conservation lands or easements to ensure connectivity and prevent resource degradation;
- implementation of fuel breaks and hazardous fuels reduction treatments to protect and conserve existing habitat; as well as,
- efforts intended to initiate or accelerate ecosystem improvement and recovery both before and after a site has burned, such as large-scale weed control, pinyon-juniper thinning, seeding, planting, and construction of fences/exclosures to control unwanted herbivory.

It should be noted that the DOI’s ability to implement multi-year restoration is dependent upon land use planning efforts, site-specific NEPA; contracting, grants, and agreements, cultural clearance, biological opinions, workforce planning and other programs that are outside the specific scope of this sub-section.

There is no single Department cross-cut for restoration efforts, and no single restoration fund. Within the Department and its bureaus, prioritization and allocation of resources for these types of restoration interventions, including monitoring and adaptive management, occur at the Department-level for programs such as the Land and Water Conservation Fund (LWCF) Collaborative and Resilient Lands. Individual Department bureaus fund most of these
restoration interventions according to individual bureau priorities, circumstances, operational constraints, organizational structure, and partnerships. At the ground level, partners may be challenged by uneven regional and/or national commitment to their project, differences in sources of money, procedures for requesting money, timing for receipt of the funding, the scale at which funds are distributed (e.g. landscape vs. treatment), and other obstacles that increase the difficulty of implementing a strategic, multi-year investment. Additionally, bureaus may have budget policy to manage “no-year” funds on a single-year basis.

To develop an effective strategy to address these institutional challenges and provide a reliable multi-year funding source throughout the duration of the restoration project life cycle, the Department must encourage greater coordination and collaboration among its numerous bureaus and programs to work together to accomplish this shared vision.

**Proposed Actions**

**Action Item #1**

*Establish standing team(s) to provide executive and staff-level coordination to enhance integration and commitment to long-term, multi-year restoration investments, including associated effectiveness monitoring and adaptive management within the sagebrush-steppe ecosystems.* Executive engagement and support will be needed to maintain long-term commitments to restoration planning, implementation, monitoring, and adaptive management. These teams should include Department Executives from OWF, PMB and all relevant bureaus that can address budget commitments, governance, and maintenance of investments. Teams may include Office of Management and Budget (OMB). Staff team(s) should be organized to support the Executives. Opportunities to utilize other existing or planned governance structures should be explored. *(See Section 7b (viii), Action Item 5 and current, ongoing efforts to organize implementation of the sage-grouse commitments).*

**Responsible Parties:** Federal land management and research agencies in collaboration with tribes, WAFWA, and other relevant partners.

**Target:** Fourth Quarter 2015

**Action Item #2**

*Document the BLM, NPS, the Bureau of Indian Affairs (BIA), USGS, and FWS activities to execute their commitments to long-term, multi-year restoration investments, including associated effectiveness monitoring, data management and integration, and adaptive management, within the sagebrush-steppe ecosystem.* DOI agencies will complete a Reporting Template and invite tribes, partners, and stakeholders to participate.

**Responsible Parties:** DOI and each bureau

**Target:** Fourth Quarter 2015
Action Item #3

Document policies internal to the Department and to DOI bureaus that relate to organizational ability to commit to multi-year investments in restoration, monitoring, and adaptive management, e.g. funding is managed on a single-year basis; funding requests are not coordinated in the President’s budget request, funding is distributed through more than one program, no program is specifically accountable for the activity. DOI agencies will complete the Reporting Template developed in Action Item 2(b).

Responsible Parties: DOI and each bureau

Target: First Quarter 2016

Action Item #4

Use the reports prepared in Action Item 3 to prepare a funding gap analysis and to identify opportunities to change policy, interpretations of policy, and procedures to facilitate multi-year commitments to restoration, monitoring, and adaptive management, to increase continuity of support for specific treatment areas, e.g. transition from Emergency Stabilization and Burned Area Rehabilitation to longer term restoration activities, and to encourage the implementation of treatments when predicted environmental conditions are favorable to treatment success (this may mean delaying a treatment from one year to another).

Responsible Parties: DOI and each bureau

Target: Third Quarter 2016

Action Item #5

Identify examples and prepare a lessons learned report and recommendations based on an examination of the following, overlapping and not comprehensive, list of examples:

Regional “brokers” or “coordinators” established to accomplish one or more of the following: prioritize treatments, combine funding sources, aggregate funds, issue contracts etc. (e.g. Utah’s Watershed Restoration Initiative, New Mexico Association of Conservation Districts, National Fish and Wildlife Foundation, Cooperative Ecosystem Studies Units, Landscape Conservation Cooperatives, Joint Ventures, Cooperative Weed Management Areas, Rural Fire Protection programs, Western Regional Partnership, Great Lakes Commission, Comprehensive Everglades Restoration Program, Chesapeake Bay Program, and Great Basin Restoration Initiative).

Department and bureau-specific programs that allow for some form of multi-year commitment or funds particular projects through their duration, (e.g. Working Capital fund, Deferred maintenance projects, Construction, LWCF).

Non-DOI programs that coordinate Federal agency programs, make multi-year commitments, or fund particular projects through their duration, (e.g. NRCS Sage-Grouse Initiative, Joint Chiefs, and LCCs), where resources are integrated by partners and targeted over multiple years.
Programs with interagency interoperability (e.g. JFSP, Service First, Suppression).

**Responsible Parties:** DOI  
**Target Dates:** Third Quarter 2016  
**Action Item #6**

*Establish team(s) to do the following:*

- Look across established restoration activities and compile the project scale monitoring indicators, methods, and sampling frameworks. Identify common attributes across the activities. Evaluate the attributes for sensitivity, bias, utility at multiple scales, and ability to be informed through remote imagery. Identify the data gaps at each scale. Make recommendations to move toward an interagency, all lands, and consistent monitoring program.

- Compile the current state of scale-specific adaptive management thresholds in the sagebrush-steppe ecosystem. Identify the gaps.

- Look across existing agency monitoring programs and identify duplicative or redundant monitoring programs. Develop recommendations to build on and leverage existing programs and eliminate redundancies.

**Responsible Parties:** DOI  
**Target Dates:** Third Quarter 2016  
**Potential Actions Beyond 2016**

- Review all of the reports to facilitate and support a cross-jurisdictional consortium of agencies, and organizations and partners dedicated to implementation of restoration, monitoring, and adaptive management activities leading to a healthy ecosystem. Consolidate recommendations.

- Adjust Departmental and bureau-specific policies, procedures and funding to implement multi-year restoration projects, including effectiveness monitoring and adaptive management infrastructure and peer review and reporting processes.

- Develop the Information and Technology (IT) infrastructure to be used as a clearing house for the common attributes. Develop the tools that are necessary for analysis and reporting.
Section 7(b) vii. – Large-scale Activities to Remove Non-Native Grasses

Issue Description/Overview

Implement large-scale experimental activities to remove cheatgrass and other invasive annual grasses through various tools

Cheatgrass, along with other invasive annual grasses, dominate or threaten to dominate millions of acres of western rangelands. Cheatgrass contributes to the size and frequency of fires and directly threatens the habitat of the greater sage-grouse and other sagebrush-obligate wildlife. To reverse this trend, land managers need tools to reduce cheatgrass while simultaneously restoring resilient sagebrush grassland ecosystems that can withstand fire and resist reinvansion of cheatgrass or other weedy species. Researchers are developing and testing these tools. Tools that show positive outcomes require management-scale tests of their effectiveness. Coordination is necessary among researchers and managers to plan, implement, and evaluate the effectiveness of the cheatgrass reduction methods and their associated restoration activities. Effective tools will restore landscapes that are resilient to fire, resistant to cheatgrass reinvasion, and provide greater sage-grouse habitat.

Proposed Actions

Large-scale experimental activities to remove cheatgrass and other invasive annual grasses through various tools will begin in 2015 with full implementation in subsequent years. The actions to accomplish this include:

Action Item #1

Develop a framework for a national Early Detection and Rapid Response (EDRR) program. This would build on existing programs to identify problematic species that could become abundant, conduct surveys to assess their extent, and take actions to limit their spread.

Responsible Parties: DOI, USDA, U.S. Department of Commerce (DOC), Environmental Protection Agency (EPA), and the National Invasive Species Council (NISC)

Target: First Quarter 2016

Action Item #2

Compile available scientific literature on effective control measures (biological, physical, and chemical) and subsequent restoration. This information would be made available through field guides and other publications to provide managers with the most recent literature as a reference for addressing the management of cheatgrass and other invasive annual grasses. It will identify all currently approved chemical and biological control agents and pending applications to assist the control and management of infestations.
Responsible Parties: USGS and BLM

Target: Fourth Quarter 2015

Action Item #3
Initiate large scale research and demonstration projects for control of cheatgrass and other invasive annual grasses to identify and advance effective strategies for preventing the spread of invasives and support large scale rangeland restoration. Researchers and managers would work together to locate and coordinate installation of long-term studies and subsequent monitoring to test the efficacy of newly registered biopesticides.

Responsible Parties: BLM, USGS, Lakeview Interagency Fire Center, FWS, NRCS

Target: Third Quarter 2016

Action Item #4
Complete the Vegetation Treatments Programmatic Environmental Impact Statement. The PEIS serves as the working document for use of herbicide use on lands managed by BLM.

Responsible Parties: BLM

Target: Fourth Quarter 2016

Action Item #5
Develop a program of work to conduct studies to control cheatgrass to reduce fuel loads and develop control measures. The program of work would identify the associated steps and resources need to accomplish the studies. This includes identification of suitable locations and process to solicit and review the proposals.

Responsible Parties: BLM, USGS, FWS, NRCS, JFSP, Great Basin Landscape Conservation Cooperative (GBLCC)

Target: First Quarter 2016

Action Item #6
Solicit and review experimental designs for control of invasive annual grasses and subsequent restoration. Large scale experimental designs would be obtained and undergo a rigorous peer-review for projects involving landscape-scale control of invasive annual grasses and subsequent restoration.

Responsible Parties: BLM, USGS, FWS, JFSP, GBLCC

Target: First Quarter 2016 and beyond
Action Item #7

*Develop a standardized long-term monitoring protocol to determine effectiveness of treatments.* Monitoring would occur through a standard process to collect data on the results of the treatments implemented in the studies. This data would be used to evaluate the success of invasive annual grass control and subsequent restoration.

*Responsible Parties:* USGS, BLM, FWS, NRCS, Agricultural Research Service (ARS)

*Target:* Third Quarter 2016

Action Item #8

*Develop a process to coordinate with the EPA on registration and labeling of new invasive annual grass biological and chemical control agents.* A structured and scheduled interaction with EPA would occur to discuss options associated with the management of invasive annual grasses. This would allow the agencies to keep current on the management options available for consideration in the management of invasive annual grasses.

*Responsible Parties:* BLM, USGS, and EPA

*Target:* Fourth Quarter 2015
Section 7(b) viii. – Science and Research

Issue Description/Overview

Commit to multi-year investments in science and research.

To develop an enhanced rangeland fire prevention, management, 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 region, key gaps in knowledge still exist. In some cases, gaps can be addressed through new research or synthesizing existing 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 usable by the management community. Filling science gaps, synthesizing 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 habitat. The action plan will take into consideration the need for science syntheses, along with new research endeavors and science delivery and will be used to direct regular and recurring investments in scientific research and information delivery. The proposed action plan will expand collaboration between management practitioners and the science community, and ensure focus on the highest priority research needs for greater sage-grouse habitat.

Proposed Actions

Action Item #1

Analysis of commitments for research in 2015 and planned for 2016. In order to have a better understanding of ongoing research commitments and to make multi-year investments in science and research for rangeland fire, invasive plants, greater sage-grouse conservation, and sagebrush restoration and management, a request will be sent to all Federal agencies inquiring about research funded in FY2015 and any planned funding commitments for FY2016. Information requested will include: research project title, management questions, lead agency, principal investigator, collaborators, project description, funding commitment, completion date, and project website (if available).

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

Target: Third Quarter 2015
Review existing research prioritization and strategy efforts to identify science needs for the Great Basin. As identified in the Actions Underway section, several research needs and strategy analyses have been completed. Using the National Research Strategy as a guide, a comparison of these efforts will be 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 management and research community to guide future funding decisions. Specific actions necessary to complete this task include:

- Identify all relevant research needs and strategy documents.
- Review existing strategies and other relevant reports to extract science needs focused on fire and invasive plants in the Great Basin.
- Compare individual needs across all documents to identify common topics and subject areas, and describe additional science needs not identified in existing documents.
- Organize the range of science needs into themes that align with management needs.

**Responsible Parties:** USGS lead in collaboration with appropriate Federal agencies and GBLCC

**Target:** Third Quarter 2015

Develop an actionable science plan of prioritized research needs. Building on the comparison and evaluation 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 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 based on input through the survey tool and input from Department 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, tribal, and GBLCC representatives

**Target:** Second Quarter 2016
Action Item #4

*Develop or identify a primary online science delivery system to allow easier access to published science products and other science information.*

The Great Basin Fire Science Exchange (GB Exchange), funded by the Joint Fire Science Program (JFSP), was created 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’s website archives 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 the needs of the Order. There are a number of other excellent sources of science and management information specifically relating to greater sage-grouse and greater sage-grouse habitat that will need to be linked in this effort in order to leverage funds and prevent duplication. The GBLCC and the Great Basin Research and Management Partnership (GBRMP) are two examples of science delivery efforts that are currently serving managers and scientists. These and others will need to be actively linked through the GB Exchange to develop a primary source of science and land management information. Additional actions to expand the GB Exchange include:

- Identify existing gaps in currently archived information about fire, invasive plants, greater sage-grouse, and the management of sagebrush habitats.
- Identify other information sources, update and maintain existing websites, and provide active links (e.g., GBLCC, GBRMP) to provide managers and scientists complete access to relevant science and land management information.
- Enhance existing processes 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 greater sage-grouse and sagebrush.
- Develop tools and services beyond on-line science delivery, including education and training targeted at resource managers and the science community.

**Responsible Parties:** JFSP – GB Exchange, in collaboration with other information providers and affected Federal and state agencies.
**Action Item #5**

**Define a process for executive leadership engagement in supporting prioritized science needs.** Executive leadership engagement and support will be 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 to consider is to establish a Great Basin interagency team through 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, whether an existing group can serve the purpose, or whether pursuing development of a Great Basin EOC will fill the need.

- If the latter, a proposal to create a Great Basin EOC 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 policy team (EOC) with senior leaders from the Federal agencies 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.
  - Determining if an interagency technical team is also needed to provide technical support to the policy team, including identifying research and monitoring needs in direct support of resource management issues.

**Responsible Parties:** DOI in coordination with USGS, BLM, FWS, USFS, NRCS, GBLCC, and relevant state agency administrators.

**Target:** First Quarter 2016

**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 and funded.

• Using the budget plan, DOI agencies and other Federal collaborators will determine funding sources for the priority needs in the action plan, opportunities for cost-sharing across agencies, and what priorities cannot be supported with existing resources.

• 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 that are ending; 2) existing project funding that would be available 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 senior level policy leads will be engaged, as appropriate, to convey budget needs in implementing the plan.

Responsible Parties: DOI, GBLCC, and DOI Science Coordinator

Target: Second Quarter 2016 for budget plan implementation, re-occurring for out-year budget requests

Potential Actions Beyond 2016

• 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 benefits to greater sage-grouse; 2) monitoring tracks landscape changes due to development, land use, and climate change; 3) appropriate data management, assessment and reporting occurs; and 4) an adaptive management framework is used. [Relates to Sections 7(b) iv and 7(b) vi]

• Climate change – Encourage collaboration between the USGS Climate Science Centers, Landscape Conservation Cooperatives, and USFS Climate Science Hubs in translating and applying recent advances in climate science to facilitate use in management and adaption planning.

• Science Syntheses – Develop syntheses reports and informational fact sheets on fire and invasive plants, and how they relate to greater sage-grouse and sagebrush to assist managers with the integration of science and land and species management applications.

• Action Plan Updates – To stay current, the action plan should be reviewed and updated periodically (e.g., every three years). This update should take the form of reviewing priorities to identify emerging science and to determine if new technological innovations have arisen and if management priorities have changed.
• Peer Review/Science Integrity Policies – Evaluate existing peer review policies and scientific integrity guidance to facilitate consistency across bureaus.
Section 7(b) ix. – Seed Strategy

Issue Description/Overview

Develop a comprehensive strategy for acquisition, storage, and distribution of seeds and other plant materials.

Native plant communities, especially those containing forbs essential to ecosystem integrity and diversity, provide ecosystem services that sustain wildlife, such as greater sage-grouse and native pollinators. The spread of invasive species, altered wildfire regimes, habitat fragmentation, and climate change negatively affected many native plant communities and the species that depend upon them. To slow and ultimately reverse these trends in the greater sage-grouse habitat areas requires, a reliable supply of genetically appropriate and locally adapted seed, as well as seeding technology and equipment for successful and expanded effective restoration of the sagebrush-steppe ecosystem.

The Initial Report identified several actions and activities relevant to this section for implementation prior to the onset of the 2015 Western fire season, including:

- Identify a forum to discuss and highlight current native seed and restoration techniques and research. Attend the Institute for Applied Ecology’s National Native Seed Conference.
- Provide an opportunity to discuss current research, case-studies, and tools that inform applied restoration opportunities in the Great Basin.

Proposed Actions

Longer term actions will begin in 2015, with full implementation in subsequent years, to improve program effectiveness, efficiency and reduce costs:

Action Item #1

Complete and issue the National Seed Strategy and Implementation Plan (2015 – 2020) to increase production, storage capacity, acquisition, and use of genetically appropriate and locally adapted seed. Solicit research proposals to help implement the National Seed Strategy.

Responsible Parties: DOI (BIA, BLM, FWS, NPS, and USGS); USDA (USFS, NRCS, ARS, National Institute of Food and Agriculture [NIFA]); DOT Federal Highway Administration (FHWA); Smithsonian; and U.S. Botanical Garden

Target: Fourth Quarter 2015
Action Item #2

Develop and implement training for managers when making decisions about the selection of genetically appropriate plant materials and technologies for vegetation restoration, including addressing the propagation and conservation of culturally important (first food) species.

Responsible Parties: DOI (BIA, BLM, FSW, NPS, USGS); USDA (USFS, NRCS, ARS, NIFA)

Target: Fourth Quarter 2016

Action Item #3

Develop a means – in collaboration with private partners – to ensure the collection, production, storage, and distribution of commercial seed for long-term rangeland conservation. Collect native seed from across the distribution of the species for use in developing commercial seed and for long-term seed banking to ensure conservation of germplasm to promote climate resilience and long-term rangeland health.

Responsible Parties: DOI (BLM, FWS, NPS); USDA (USFS)

Target: Fourth Quarter 2015; ongoing

Action Item #4

Establish pilot projects that will serve as training/demonstration sites on planting native seed species, with monitoring to determine the effectiveness of the restoration techniques.

Responsible Parties: DOI (BIA, BLM, FSW, NPS, USGS); USDA (USFS, NRCS, ARS, NIFA); DOT (FHWA)

Target: Fourth Quarter 2016

Action Item #5

Develop a Business Plan for the National Seed Strategy. Identify funding sources and processes necessary to implement the National Seed Strategy.

Responsible Parties: DOI (BIA, BLM, FWS, NPS, and USGS); USDA (USFS, NRCS, ARS, National Institute of Food and Agriculture [NIFA]); DOT Federal Highway Administration (FHWA); Smithsonian, and U.S. Botanical Garden

Target: Fourth Quarter 2015

Action Item #6

Develop an interagency budget initiative for FY 2017. Work across agencies and Departments to initiate an interagency budget initiative for funds to implement the National Seed Strategy.
Responsible Parties: DOI (BIA, BLM, FWS, NPS, and USGS); USDA (USFS, NRCS, ARS, National Institute of Food and Agriculture [NIFA]); DOT Federal Highway Administration (FHWA); Smithsonian, and U.S. Botanical Garden

Target: Fourth Quarter 2015; ongoing into 2017

Action Item #7

Produce sagebrush seedlings annually for greater sage-grouse habitat restoration. Produce 100,000 sagebrush seedlings annually for greater sage-grouse habitat restoration through the Sagebrush Grow Out program (seedlings grown for planting in wildfire burned areas or restoration areas to establish native plant communities), in five Great Basin prisons.

Responsible Parties: BLM

Target: First Quarter 2016

Action Item #8

Coordinate and collaborate across agencies on current and future climate trend data. Understand the trends in climate, across the Western United States with a focus on sagebrush-steppe and pinyon/juniper ecosystems.

Responsible Parties: BLM, USGS, USFS

Target: Fourth Quarter 2015; ongoing

Action Item #9

Increase the availability of native seed for the Great Basin. Increase the grow-out of native plant species for the restoration of the sagebrush-steppe ecosystem within the Great Basin, which will provide necessary structure and habitat, as well as dietary, and other benefits for the greater sage-grouse.

Responsible Parties: BLM, FWS, USFS

Target: Fourth Quarter 2015; Ongoing

Action Item #10

Develop a comprehensive restoration strategy and program with policies and consistent funding to restore native plant communities on a landscape-scale across public lands.

Responsible Parties: TBD

Target: TBD
## Appendix A – Initial Report Action Item Table

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsible Party/Parties</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and share a geospatial tool that highlights areas of concern in the Great Basin and includes, at a minimum, focal, Fire and Invasives Assessment Tool (FIAT) and Priority Habitat Management areas.</td>
<td>BLM/USGS</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#1. Increase the capabilities of rural/volunteer fire departments and RFPAs and enhance the development and use of veterans crews.</td>
<td>OWF/Agency Fire Leadership</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>#2. Ensure local, MAC groups are functional and MAC plans are updated.</td>
<td>MAC groups working with local Federal wildland fire suppression agencies, tribes state fire suppression agencies, RFPAs, local fire departments, and other cooperators</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#3. Develop and implement minimum draw-down level and step up plans to ensure availability of resources for protection in priority greater sage-grouse habitat.</td>
<td>Federal local unit FMOs, in coordination with cooperators and reviewed by Federal state/regional FMOs</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#4. Apply a coordinated risk-based approach to wildfire response to assure initial attack response to priority areas.</td>
<td>Local MAC groups and unit FMOs, with review by Federal regional/state FMOs</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#5. Develop a standardized set of briefing materials.</td>
<td>Geographic Area Coordinating Groups (GACGs) and local MACs</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#6. Review/update local plans and agreements for consistency and currency to ensure initial attack response to priority greater sage-grouse areas.</td>
<td>Federal local unit FMOs in coordination with cooperators and with review by Federal regional/state FMOs</td>
<td>May 15, 2015</td>
</tr>
<tr>
<td>#7. Develop supplemental guidance for use of “severity funding.”</td>
<td>DOI OWF in coordination with BLM</td>
<td>May 15, 2015</td>
</tr>
<tr>
<td>Action Item</td>
<td>Responsible Party/Parties</td>
<td>Target Date</td>
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<tr>
<td>#9. Increase the availability of technology and technology transfer to fire management managers and suppression resources.</td>
<td>DOI national bureau leadership; DOI state/ regional and local unit managers</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>#10. Improve the description and awareness of critical resource values threatened in various stages of the fire response process including large fire management.</td>
<td>NMAC Group, National Interagency Coordination Center, and Geographic Area Coordination Centers</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>#11. Ensure compliance and evaluation of the implementation plan action items.</td>
<td>Local Unit FMO and Federal regional/ state FMOs.</td>
<td>July 1, 2015</td>
</tr>
</tbody>
</table>

### 7(b) ii – Prioritization and Allocation of Resources

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsible Party/Parties</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1. Communication Plan</td>
<td>National Agency Fire Leadership (DOI Bureaus and USFS)</td>
<td>April 1, 2015</td>
</tr>
<tr>
<td>#2. Review and update the delegation of authority for the NMAC Group.</td>
<td>National agency leadership (DOI Bureaus/USFS/NASF)</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#5. Develop “Delegation of Authority” template for use by local line officers.</td>
<td>NMAC</td>
<td>May 1, 2015</td>
</tr>
<tr>
<td>#6. Engage line officers to communicate Leaders’ Intent and expectations.</td>
<td>Federal agency leadership (USFS/DOI Bureaus)</td>
<td>June 1, 2015</td>
</tr>
</tbody>
</table>

### 7(b) v – Post-Fire Recovery

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsible Party/Parties</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1. Review and update ES and BAR policy guidance to address rating and evaluation criteria, project design to promote the likelihood of treatment success, cost containment, monitoring, and continuity and transition to long-term restoration activities and treatments.</td>
<td>I-BAER/OWF/IFEC/FEC/Federal Fire Policy Council</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>Action Item</td>
<td>Responsible Party/Parties</td>
<td>Target Date</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>#2. Address acquisition, financial management, and other procedures that pose challenges to timely project implementation.</td>
<td>OWF/Bureau Designated Representatives</td>
<td>July 1, 2015</td>
</tr>
<tr>
<td>#3. Accelerate schedule approving BAR projects consistent with the guidelines established for the 2015 fire season.</td>
<td>IBAER/DOI Bureaus</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>#4. Identify non-fire programs and activities that will fund treatments and restoration activities for the long term in conjunction with BAR and ES policy and program review to be conducted in 2015.</td>
<td>All Affected DOI Bureaus</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>#5. Identify requirements for NFPORS capabilities.</td>
<td>IBEAR/DOI Bureau</td>
<td>June 1, 2015</td>
</tr>
</tbody>
</table>

**7(b) ix – Seed Strategy**

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsible Party/Parties</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1. Develop the draft National Seed Strategy and Implementation Plan (2015 – 2020)</td>
<td>BLM (lead agency) BIA, FHA, USFS, FWS, NPS, ARS, NRCS, NIFA, and USGS (support agencies)</td>
<td>April 2015</td>
</tr>
<tr>
<td>#2. Identify a forum to discuss and highlight current native seed and restoration techniques and research.</td>
<td>BLM and USFS</td>
<td>April 2015</td>
</tr>
<tr>
<td>#3. Provide an opportunity to discuss current research, case-studies, and tools that inform applied restoration opportunities in the Great Basin.</td>
<td>BLM and USFS Great Basin Native Plant Project, Society for Ecological Restoration, and Fire Science Exchange</td>
<td>May 2015</td>
</tr>
</tbody>
</table>
Appendix B – Glossary of Terms

Adaptive Management
Adaptive management focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable ecosystems.

Burned Area Rehabilitation (BAR)
The post-fire activities prescribed and implemented to rehabilitate and restore fire damaged lands.

Draw Down Level
The minimum level of personnel and equipment resources needed (at either the local or national level) without compromising response capability.

Emergency Stabilization (ES)
Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources.

Fire Management Plan
A plan that identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. A fire management plan defines a program to manage wildland fires (wildfire and prescribed fire). The plan is supplemented by operational plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans, and prevention plans. Fire management plans assure that wildland fire management goals and components are coordinated.

Multi-Agency Coordinating Group (MAC Group)
A national, regional, or local management group for interagency planning, coordination, and operations leadership for incidents. Provides an essential management mechanism for strategic coordination to ensure incident resources are efficiently and appropriately managed in a cost-effective manner.

National Environmental Protection Act (NEPA)
The purpose of NEPA is to ensure that environmental factors are weighted equally when compared to other factors in the decision-making process undertaken by Federal agencies. The Act establishes the national environmental policy, including a multidisciplinary approach to considering environmental effects in Federal Government agency decision-making.

Organizational Owner

SO 3336 – A Set of Longer-term Actions and Activities
Organization owner is the organization (Federal, state, or local) that funds the resource or resources.

**Rangeland Fire**

Any wildfire located on rangelands.

**Section 106**

Requires Federal agencies to consider the effects of projects they carryout, approve, or fund on historic properties.

**Severity Funding**

Suppression funds used to increase the level of pre-suppression capability and fire preparedness when predicted or actual burning conditions exceed those normally expected, due to severe weather conditions.

**Step Up Plans**

Step up plans (also called staffing plans) are designed to direct incremental preparedness actions in response to increased fire danger.

**Wildfire**

An unplanned, unwanted wildfire including unauthorized human-caused fires, escaped planned fire events, and all other wildland fires where the objective is to put the fire out.