List of Major Changes, Additions, or Edits

This document identifies the SLT changes to the version of the draft species report used for our discussions in Fort Collins, CO the week of June 1, 2015. This document also identifies items still missing from the draft report. Editorial and minor changes (e.g. insertion of page numbers in citations) and deletions of preliminary summaries are not noted here.

Overarching Items:

- Comments received from project leaders and their staff, and the solicitor's office, on the draft species report have not been addressed or incorporated.
- The Impacts section has not been cross-walked with the Regulatory Mechanisms section for completion or correction of errors.
- This draft of the species report has not been cross-walked with information received from the external data call to ensure that nothing was missed.
- Information received after June 4, 2015 has not been incorporated into the draft species report. However, all information received after June 4, 2015 has been forwarded to the Federal Register Team.
- No new Conservation Effort Database analyses have been conducted.
- Several citation page numbers are still missing.
- The Literature Cited for the draft species is still incomplete and will be submitted at a later date, when all the references have been verified.
- All placeholders have been removed.

Introduction:

- Figure 2-3, percent of range-wide greater sage grouse population by Management Zone, was updated with the re-calculated population index model numbers.
- Land ownership tables were updated to reflect the re-calculation of breeding habitat density model by Kevin Doherty.
- Missing two appendices from the introduction section:
  - Description of the habitat variables used in the breeding habitat model (reference p. 26, line 768 Introduction);
  - Description of the population index (reference p. 28, line 794, Introduction); and
  - The inclusion of the above Appendices will necessitate re-ordering of Appendices B-F, with concurrent changes in the text of the Introduction and Impacts sections.

Impacts Analysis:

Fire

- Figure 5.1 was replaced. Overlapping fires were incorrect in previous version
- PLACEHOLDER REMOVED Figure – FIAT Resistance Classes (3)
  - This figure is available (not in the draft Species Report)
- PLACEHOLDER REMOVED Table - Acres/Percent of FIAT Classes in Occupied Range by MZ
  - This table is available (not in the draft Species Report)
- Burn rate tables and burn rate graphs are missing

- Line 367-369: The following sentences were removed because analyses were missing: "Sage-grouse within are X & X times larger than MZs III and V populations respectively. We found X% of birds were within moderate and high resistance categories across the entire Great Basin irrespective of MZs."
- Lines 445-446: The following clarifying text was added to the end of the first sentence under the "Anticipated Changes from Present" section to clarify that the fuel modules discussed were different from the analyses conducted by the Service: "(e.g., see the NIFC Geographic Area Coordination Web site at http://gacc.nifc.gov/rmcc/predictive/firedngr.htm)."
- Additional data was received from the BLM that was not incorporated:
  - On 4/29/15 Secretary Jewell announced over $4 million to protect sagebrush lands threatened by rangeland fire:
    - Idaho will receive $1.78 million
    - Nevada will receive $638,000
    - Utah will receive $811,000
    - Oregon will receive $1.03 million
  - On 6/2/15 the BLM provided the Service with new plan and project info from the BLM Fire Center.
  - On 6/2/15 the BLM provided the Service with draft data summarizing the status of NEPA (e.g., completed, initialized, or needed) for proposed treatments described in the five FIAT step-down assessments. Additional analyses were conducted by the Service GIS team to describe the percent of each R&R class that contained FIAT projects within the currently occupied range by MZ within the Great Basin region.
  - On 6/12/15 the DOI announced $10 million in funding for projects aimed at restoring the health and fire resilience (i.e., Resistant Landscapes Collaborative). Of this ~$7.7 million was allocated to projects within the range of sage-grouse:
    - Bi-State $395,000
    - Bruneau-Owyhee $166,000
    - Greater Sheldon Hart Mountain $3,984,250
    - Southern Utah $2,605,000
    - Southwest Colorado $557,000

Invasive Plants

- Lines 930-933: Citations by Lockyer 2012 needs to be updated with newly published literature: Lockyer, Z. B., P. S. Coates, M. L. Casazza, S. Espinosa, and D. J. Delehanty. 2015. Nest-Site Selection and Reproductive Success of Greater Sage-Grouse in a Fire-Affected Habitat of Northwestern Nevada. Journal of Wildlife Management DOI: 10.1002/jwmg.899.
- Table 6.3 is now complete.
- Missing items:
  - Map of FIAT classes in the Great Basin
  - Table of acres of each FIAT class within occupied range
- On 6/10/15 the Service received an update of the extent of invasive species from the BLM, as detailed in the following four paragraphs. The draft species report was not updated with this information.

  - Starting at line 972: "A recent inventory completed in 2014 by the BLM provides gross estimated acres for 26 selected species on public lands administered by the BLM. The table below provides the state specific data for California, Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Annual grasses include downy brome (cheatgrass), red brome, buffelgrass, Mediterranean grass, and medusahead rye accounting for 51,981,594, of the 77,524,925 estimated acres. This is a significant increase from the acres identified in the 2000 survey

(BLM, 2000) which reported 28,775,995 acres infested with downy brome, ripgut brome, Japanese brome, red brome, Mediterranean grass, and medusahead rye in for California, Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. "

- The new information from BLM included this table:

2014 BLM Weed Inventory Summary			
State	**Acres Annual Grasses[1]**	**Acres Other Invasive/Noxious Weeds[2]**	**Total Gross Estimated Acres**
California	4,395,500	635,739	5,031,239
Colorado	1,567,736	445,098	2,012,834
Idaho	5,373,002	1,965,322	7,338,324
Montana	231,965	863,390	1,095,355
Nevada	25,929,222	4,571,896	30,501,118
North Dakota	0	173	173
Oregon	6,557,658	13,898,636	20,456,294
South Dakota	14	1,205	1,219
Utah	7,596,812	3,078,255	10,675,067
Washington	44,342	594	44,936
Wyoming	285,343	83,023	368,366
TOTAL ACRES	51,981,594	25,543,331	77,524,925

1. Includes downy brome (cheatgrass), red brome, buffelgrass, Mediterranean grass, and medusahead rye.
2. Other Invasive/Noxious Weeds includes bull thistle, Canada thistle, dalmatian toadflax, diffuse knapweed, dyer's woad, halogeton, hoary cress, leafy spurge, Italian thistle, malta starthistle, musk thistle, perennial pepperweed, plumeless thistle, Russian knapweed, Russian olive, salt cedar (tamarisk), scotch thistle, spotted knapweed, squarrose knapweed, yellow starthistle, and yellow toadflax.

- Starting at Line 1224: **"**Areas with established annual grasses that receive less than 22.9 cm (9 in.) of annual precipitation are less likely to benefit from restoration (Connelly et al. 2004, p. 7–17, Carlson 2008b, pers. comm.). In 2010 it was stated that BLM focuses most (98 percent) of their restoration efforts in areas receiving more than 22.9 cm (9 in.) of annual precipitation where there is greater chance of success. Of the BLM treatments in annual grasslands, only 10 percent of acres treated in areas receiving less than 22.9 cm (9 in.) of annual precipitation were considered to be effectively treated. In areas receiving between 22.9 cm (9 in.) and 30.5 cm (12 in.) of annual precipitation, 33.6 percent of the acres were treated effectively, and 3.3 percent of the acres were treated effectively in areas receiving greater than 30.5 cm (12 in.) of annual precipitation (Carlson 2008b, pers. comm.). Using export data provided to the BLM from the Conservation Effects Database (CED) on March 2015, involving efficacy determination of treatment projects involving noxious weed/annual grasses management, 97% of the 405 projects, involving treatment of greater than 500 acres, were rated as being effective or highly likely effective. Only 3% rated as unlikely or uncertain in efficacy determination. The projects involved in the analysis represented greater than 2 million treated acres."

- Starting at line 1257: "It was stated, in 1996, that noxious weeds are spreading at a rate of 931 ha (2,300 ac) per day on BLM-administered lands (BLM 1996, p. 1), this equates to 339,815 ha (839,500 ac) per year, which includes both suitable and non-suitable habitat for sage-grouse. Weed

inventories, conducted by the BLM, indicate an increase of 180% in acres infested by annual grasses such as downy brome (cheatgrass), ripgut brome, Japanese brome, red brome, Mediterranean grass, and medusahead rye between 2000 and 2014. In a 2014 BLM weed inventory, weed species included downy brome (cheatgrass), red brome, buffelgrass, Mediterranean grass, and medusahead rye increased 28,775,995 infested acres to 51,981,594 acres in California, Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Duncan and Jachetta cite an average rate of spread, for downy brome and medusahead rye of 14 and 12 percent, respectively. (Invasive Plants of Range and Wildlands and Their Environmental, Economic, and Societal Impacts, 2005)"

- Starting at Line 1267: "Currently, the BLM treats an average of 175,000 acres BLM-wide, a reduction from 2010. This equates to 0.3% of the total acres infested treated for the management of current weed populations on the public lands administered by the Bureau. 97% of the 405 projects, involving treatment of greater than 500 acres, were rated as being effective or highly likely effective. Only 3% rated as unlikely or uncertain in efficacy determination as reported earlier by the export data provided to the BLM from the Conservation Effects Database (CED) on March 2015, involving efficacy determination of treatment projects involving noxious weed/annual grasses management. The projects involved in the analysis represented greater than 2 million treated acres. The determination of efficacy is influenced by many factors, ranging from the characteristics of the proposed management site prior to, and following the management operation, whether the management operation is targeted grazing, mechanical operations, or use of an herbicide. Projects may involve the re-introduction of desirable vegetation, due to the length of time the site has been infested, of taking advantage of the current species composition of the site and the removal of the invasive species, allowing the desirable species to re-introduce."

- The BLM conducted a separate analysis on effectiveness of projects entered into the CED and provided the following update on 06/10/15. This has not been incorporated into the draft species report.
  - 405 projects >=500 acres with the threat of Noxious Weeds/Annual Grasses = 2,093,937 acres
    - 29 of the projects listed with Effectiveness of Uncertain/Unlikely = 51,138 acres (2.4%)
    - 174 of the projects listed with Effectiveness of Highly Likely = 988,006 acres (47.2%)
    - 202 of the projects listed with Effectiveness of Yes = 1,054,793 acres (50.4%)
  - Using these acreages, the BLM found 50% of the >=500 acres Noxious Weeds threat projects were reported as being effective.
  - For completed projects only:
    - 380 completed projects >=500 acres with the threat of Noxious Weeds/Annual Grasses = 1,966,469 acres
    - 25 of the completed projects listed with Effectiveness of Uncertain/Unlikely = 47,558 acres (2.4%)
    - 156 of the completed projects listed with Effectiveness of Highly Likely = 871,916 acres (44.3%)
    - 199 of the completed projects listed with Effectiveness of Yes = 1,046,995 acres (53.2%)

Conifer Encroachment

- The paragraph starting on line 1708 needs to be updated with the following information received on 06/02/15 from NRCS:
  - SGI has averaged removal of about 32,250 ac/yr in Oregon (inside PACs). On the current trajectory, NRCS believes they are on track to completely address the conifer encroachment issue on private lands in Oregon, in PACs within the decade.

- Table presenting conifer totals (current acres and acres potentially at-risk) areas is missing.
    - Table are available for this chapter (not in species report)
- Newly published literature was not incorporated: Farzan, S., D. J. N. Young, A. G. Dedrick, M. Hamilton, E. C. Porse, P. S. Coates, and G. Sampson. 2015. Western Juniper Management: Assessing Strategies for Improving Greater Sage-grouse Habitat and Rangeland Productivity. Environmental Management DOI 10.1007/s00267-015-0521-1.

Agricultural Conversion

- Figures 8-1, 8-2, and 8-3 referencing the Service's cropland conversion model are missing.
- CCAA numbers need to be updated.

Non-Renewable Energy Development

- Information starting at line 2273 regarding water quality and quantity needs further development and updating.
- Information starting at line 2292 regarding gaseous emissions needs to be updated with data from the Pinedale Anticline area – available from contaminants staff in the WYESFO.
- Information starting at line 2397 regarding the actual rates of development needs to be updated.
- Information regarding BLM management of valid existing rights is missing (reference line 2529).
- The following items were updated with the new information presented at Fort Collins for the oil and gas model:
    - Figure 9.1
    - Updated development scenarios from Min, Mean, Max to Low, Baseline, and High.
    - Updated percentages in 'Anticipated Changes from Present'
- Missing Items:
    - Map and table of EXISTING development is available for this chapter (not in species report)
    - Map and RM Region O&G Reserve Basins is available for this chapter (not in species report)

Mining

- GIS analyses and maps for this chapter are missing.
    - These are complete but have not been incorporated.

Renewable Energy

- Figure 11-2 (solar potential) has been removed. It was not cited in the text.
- Replaced figure 11-1, to remove wind farm symbology.
- Every table in this chapter was corrected as they contained errors to decimal points and percentages.

Infrastructure

- All tables in this chapter have been updated to reflect corrected totals range-wide.
- Tables detailing secondary roads are missing (these were just completed but have not been incorporated).
- Figures 12-1, 12-3, 12-4 have all been updated, removed AOI and wind farm symbology.

Fences

- Lines 3920 – 3930, the justification for using non-species specific literature has not been made.

Grazing

- Table 14-1: the intersect of grazing allotments authorized with the population index is incomplete.

Free-roaming Equids

- The "Candidate Conservation Agreements with Assurances and Candidate Conservation Agreements" section was removed because it was incorporated into the Grazing chapter and the language was not appropriate for the Free-roaming equids chapter.
- Table 15-1 was updated with corrected acreages and percentages.

Urbanization

- Updated Tables 16.2 and 16.3 with corrected acreages and percentages.

Recreation

- The following was removed from line 5422-5423 because the analyses were missing: "To the Service's knowledge, X areas (X percent of BLM land) within sage-grouse habitat are closed for recreational use."

Drought

- Figure 19-1 needs to be updated to include MZ boundaries and sage-grouse range.

Military Activities

Pending items for consideration in this chapter:

- Have not received INRMPs from Utah installations.
- Need to clarify what installations should be included in the analyses:
  - This chapter needs to be cross-walked with regulatory mechanisms to address potential inconsistencies between chapters.
- Need to address INEL – technically a DOE facility, but is used by the U.S. Navy
  - INL contains primary sage-grouse habitat within its approximately 800,000 acre facility boundary. Approximately 55 leks are located on the site.
  - INL entered into a CCA with FWS (ID ES FO) in 2014 to conserve 75% of the breeding males on leks on the site.
  - INL designated Sage-grouse Conservation Areas (SGCAs) with associated conservation measures similar to the measures on adjacent federal lands. SGCAs are designated as zones where infrastructure will not occur or will only occur with specific conservation measures and mitigation applied.

Regulatory Mechanisms and Conservation Efforts

- Removed summary paragraphs.
- Added drop-in language from BLM plans to the fluid minerals land allocation section.
- State planning write-ups will need to be updated as planning efforts will likely evolve in several states over the next month or two.

- Information on Rural Fire Protection Districts needs to be solicited from the FWOs and added.

- The Conservation Efforts and Regulatory Mechanisms sections have not been cross-walked with the text in the conservation efforts and regulatory mechanisms subsection of each impact chapter.

Cumulative and Synergistic Impacts

- No changes made – these sections are incomplete.

Appendices:

- Missing three appendices from the introduction section:
  - Description of the habitat variables used in the breeding habitat model (reference p. 26, Introduction);
  - Description of the population index (reference p. 28, Introduction); and
  - Description of the breeding habitat index (not referenced, but should be referenced in the Introduction).
  - The inclusion of the above Appendices will necessitate re-ordering of Appendices B-F, with concurrent changes in the text of the Introduction and Impacts sections.
- Appendix F: Description of Oil and Gas Model is missing.