BI-STATE SAGE-GROUSE CONSERVATION ACTION PLAN

2015 PROGRESS REPORT

Bi-State Local Working Group
BLM – Bishop
BLM – Carson City
USFS – Humboldt - Toiyabe
USFS – Inyo
NRCS
NDOW
CDFW

Table of Contents

Executive Summary

This progress report provides summaries of various conservation actions completed within the Bi-State conservation planning area through 2015 including project accomplishments, lek survey and monitoring, population demography and movement, vegetation monitoring and conifer removal prioritization. Additional detailed information is provided in the appendix section of this progress report.

Some highlights for project accomplishments through 2015 include:

- 10 Pinyon and juniper removal projects totaling 7,529 acres;
- 6 Wildfire restoration projects totaling 1,676 acres;
- 4 Conservation easements totaling 7,056 acres;
- 11 Fence modification, removal or making projects totaling 18 miles;
- 4 Invasive weed control projects totaling 111 acres;
- 7 Projects addressing loss of sagebrush/meadow habitat totaling 419 acres; and
- 21 Public education/awareness events

Population performance, as measured by average male sage-grouse lek attendance within designated Population Management Units (PMUs), decreased by 17.5% from the previous year's average of 25.1 males per lek in 2014 to 20.7 males per lek in 2015. The only PMU where an increase was detected occurred in the Desert Creek/Fales PMU, and that increase was largely attributable to lek attendance increases within the California portion of the PMU (Wheeler Flat 3 and Jackass 1 leks). No changes were detected within either the Nevada portions of the Pine Nut or the White Mountains PMUs; however, these populations are considered so small that marginal changes in population size are difficult to detect. Average male lek attendance within the stronghold populations of the Bi-State DPS, which includes the Bodie and South Mono PMU's, was down 8.4% and 19.3% respectively from 2014.

In 2012, the Bishop BLM initiated a telemetry study to better understand habitat use by the Bi-State distinct population segment (DPS) of greater sage-grouse. This effort was undertaken in partnership with the Nevada Department of Wildlife, California Department of Fish and Wildlife, Humboldt-Toiyabe National Forest, Inyo National Forest and the U. S. Geological Survey. Some highlights from the project include:

- Long distance movements of two birds captured near Mt. Grant, in the Mt. Grant PMU in October of 2012 moved 24 and 32 miles respectively to the Bodie Hills to nest.
- Shrub cover was significantly (ANOVA $p < 0.05$) different between the study areas, with Mt. Grant average shrub cover being the lowest at 14.8%.
- The successful protection of islands of sagebrush during wildfire suppression and intentionally retaining finger like boundaries resulted in a mosaic of habitat that was used by grouse for nesting and brood rearing.
    - These sagebrush islands were used year-round by sage-grouse.
    - Incorporating these fire suppression techniques results in a post fire landscape that retains more habitat for grouse than traditional "burn out" techniques.

Sage-grouse monitoring work was also conducted in the Pine Nut PMU during 2011–15. USGS research crews radio- and Global Positioning System (GPS) -marked (2012–2014 only) 31, 45, 18, 7, and 3 sage-grouse, respectively. Preliminary findings indicate that pinyon-juniper is avoided by sage-grouse during every life stage. Nesting females selected increased sagebrush cover, sagebrush height, and understory horizontal cover, and

brood-rearing females selected similar areas but also preferred increased perennial forb abundance. Nest survival during 2011–14 was 23.8 percent (95-percent confidence interval=10.3–40.6 percent) and appeared lower for the Pine Nut Mountains PMU than for other populations range-wide. Alternatively, 50-day brood survival was 53.8 percent (95-percent confidence interval=30.0–73.4 percent) and appeared higher for the Pine Nut Mountains PMU than for other populations range-wide, but was quite variable. During 2011–14, 146, 222, 224, and 104 raptor/raven surveys were completed, respectively, and results indicate a greater number of raven detections (n=464) in the Pine Nut PMU than at other study areas in Nevada. Movement corridors between seasonal habitats were identified with one sage-grouse traveling greater than 100 kilometers south to the Bodie Hills for the winter season.

The Nevada Partners in Conservation and Development (NPCD) program has surveyed approximately 500 plots across the Bi-State PMUs through 2015. Sampling was initiated in 2011 for the Pine Nut Mountains, Long Doctor and the China Camp project sites and these project locations now have rich data sets showing pre and post treatment effects. Preliminary analyses indicate an increase in perennial grass cover/abundance. 2014 and 2015 were drier winters and there has not been a change in perennial forb cover abundance. It is expected that the relatively wet 2015-2016 winter will provide the moisture necessary to allow for some perennial forb increases. Since 2011, numerous projects have been proposed and are in various stages of planning and implementation. The NPCD is working to provide project effectiveness monitoring at as many projects as is practical.

To help track and evaluate livestock grazing performance within the Bi-State DPS, a spreadsheet was developed by the BLM's Bishop Field Office and the U.S. Forest Service. The spreadsheet contains information for 149 allotments associated with Bi-State PMUs. These allotments consist of 122 active, 13 vacant, 9 inactive and 5 non-use allotments. Approximately 1.35 million acres are within priority Bi-State habitat and managed by federal land management agencies. Rangeland health assessments indicate that 88% of allotments were meeting standards in the uplands and 63% of allotments were meeting standards or some equivalent in the riparian areas.

Two separate meetings were held to assess the rankings of conifer projects that were evaluated using the Conservation Planning Tool (CPT or model), one for the south portion of the Bi-State conservation area and one for the north. This was determined to be necessary because the model is designed to inform the rankings, then incorporate local knowledge and other factors to determine the final rankings. This ranking should occur yearly to ensure that, as we learn more about the habitat and treatment success or failure, we adapt our priorities if necessary. For the south portion, rankings of the best and worst conifer removal polygons were consistent with the CPT. However, based on local knowledge and implementation strategies (such as combining all Long Valley units) the ones that ranked in the middle moved around a bit. In the northern portion, the re-ranking of the units resulted in more refined ranking that factors local knowledge into the modelling. We determined that grouping the individual units made more sense from a logistical standpoint. It afforded a more landscape approach for NEPA and also increased efficiencies with regard to surveys and contractors. Once the group hit the top 12, it was more and more difficult to determine what should rank higher. Additionally, the top 12 will take several years to complete, so unless new information indicates a need to rank these more diligently, the units ranked 12-21 are not differentiated much in the ranking.

2015 Accomplishment Summary for the Bi-State Action Plan

In 2004, the first conservation plan for the Bi-State DPS was released. This plan identified conservation actions to be completed and it summarized the status of the bird and the relevant threats. This stakeholder-driven plan was developed by members of the Local Area Working Group (LAWG) with participation from the California BLM, California Department of Fish and Wildlife, Nevada Department of Wildlife, U.S. Fish and Wildlife Service, Nevada BLM, the U.S. Forest Service, Natural Resources Conservation Service, Mono County and Los Angeles Department of Water and Power. From 2004 to 2011, members of the LAWG implemented the plan, completing thousands of acres of habitat improvement projects.

An interagency effort in 2011 resulted in an updated Conservation Action Plan that was released in March of 2012. This Action Plan summarized prior conservation activities and provided a roadmap to future conservation of the Bi-State Distinct Population Segment (DPS) of greater sage-grouse. During this process, a total of 76 broad conservation actions were identified to improve habitat conditions for Greater sage-grouse within the Bi-State DPS. Several of these actions were conifer removal projects that were further evaluated through a modeling process (Bi-State Conservation Planning Tool or CPT) which was based on scientific input. Results of this process were further refined through professional expertise, local knowledge and logistical considerations (see Conifer Re-ranking sections). This refinement resulted in the identification of several other projects that fit into these broader conservation actions, but were alterations of previously identified project polygons or new projects altogether. Subsequent progress reports will track accomplishments against these refined projects (otherwise known as the CPT Re-ranked list).

In June of 2014, NRCS, USFS, BLM and other Bi-State partners announced a $45 million dollar commitment to implement the 2012 Action Plan over a 10 year period. Table 1 provides a summary of the on-the-ground conservation actions that have been implemented to improve habitat for the Bi-State DPS from the Action Plan completion in 2015. Table 2 summarizes other actions such as research and monitoring, planning and coordination between agencies. For a complete list of completed projects, please refer to Appendix A (attached).

Table 1. Conservation Actions completed for the Bi-State DPS 2015

RISK ADDRESSED Project Type	# of Projects	Miles, Acres or Sites Treated	Project Locations[2]	PMU: High/ Moderate Threat[2]
PINYON-JUNIPER EXPANSION				**ALL PMUs**
Pinyon-Juniper removal: conifer removal	10	7,592 acres	All PMUs	
WILDFIRE				**ALL PMUs**
Wildfire: rehabilitation	6	1,676 acres	B, MG, SM	
Pinyon-Juniper removal: fuels reduction	1	656 acres	PN	
URBANIZATION				**ALL** (except MG)
Conservation easements	4	7,056 acres	B, DCF, PN	
INFRASTRUCTURE				**ALL** (except WM)
Fences: modification, removal, marking	11	18 miles	B, DCF, MG, SM	
Roads: permanent closures, seasonal and	10	7 miles	B, SM	

improvements	2	71 sites		
GRAZING				
Livestock Management (exclosures)	1	441 acres	B, DCF, PN	Permitted grazing: Low for all PMUs
Livestock exclusion (fence construction)	1	1 site		
Wild horses: aerial and ground count	8	2 sites	SM	Moderate (SM, PN, MG)
INVASIVE AND NOXIOUS SPECIES				**PN, MG**
Invasive and noxious weed control-mechanical and chemical	4	111 acres	B, DCF, MG, SM	
Invasive and noxious weed inventory	1	674 acres	DCF, MG	
HABITAT-BASED				**DCF**
Loss of sagebrush/meadow habitat: Restoration	7	419 acres	B, DCF, MG SM	
Loss of sagebrush/meadow habitat: Field Exam	2	2 sites	B	
PUBLIC AWARENESS				**N/A**
Interpretation/Education	21	45 events	All PMUs	
News & Media (print, digital, audio)	10	10 outreaches	All PMUs	
Awards (WAWFA & SGI recognize Bi-state)	2	2 Awards	All PMUs	

1. Population Management Unit (PMU) abbreviations:
   PN – Pine Nut
   DCF – Desert Creek-Fales
   B – Bodie
   MG – Mount Grant
   WM – White Mountains
   SM – South Mono

Table 2. Action Plan accomplishments not included in Table 1

OTHER ACTION PLAN ACCOMPLISHMENTS	DESCRIPTION / MEASURES
Coordinated interagency approach (CIA 1)	• Cooperative Funding Agreement for Bi-State DPS conservation work granted to Mono County by the Bishop BLM • Cooperative Funding Agreement for Bi-State DPS conservation work granted to NDOW from the BLM • Sage-grouse Service Team approach as evidenced by staff working across state and agency boundaries to accomplish shared goals • Technical Advisory Team reprioritized the proposed conifer removal polygons in the Conservation Planning tool • Held meeting to discuss the Benton Crossing dump closure
Science-based adaptive management plan (SAM 1 & 2)	• Funding for Science Advisor has been provided from 2012-2015 (SAM 1) • Conservation Planning Tool has been implemented and continues to be refined (SAM 2)
Improve regulatory mechanisms (IRM 1 & 2)	*Note: these actions directly address FWS Threat Factor D.* • The Humboldt-Toiyabe National Forest has prepared the Final Environmental Impact Statement and Draft Record of Decision for the Greater Sage-grouse Bi-state Distinct Population Segment Forest Plan Amendment. A final Forest Service decision is expected in May of 2016 (IRM 1-6).

	• The BSSG ROD is anticipated to be signed May 2016 for BLM land managed by the Carson City District and the Tonopah Field Office. This land use plan amendment will provide goals, objectives, actions and best management practices to protect BSSG habitat (IRM 1-5 and 1-7). • The INF is currently updating its Land and Resource Management Plan (Forest Plan). The Draft EIS and Draft Plan should be released for comment at the end of May 2016. There will be a 90-day comment period and the goal is to have a Final EIS and plan ready for the objection period by May, 2017. (IRM 1-8). • Mono County initiated a General Plan Update with a specific focus of improving regulatory protection for the Bi-State DPS (IRM 2-1).
Small populations (MER 7)	• Development of a translocation plan for the Parker population is in progress. Field tour occurred summer of 2015 and agreements between DWP, USGS and CDFW are under way. Parker translocation planned for spring of 2017 (MER 7-1).
Research and Monitoring (RAM 1 thru 5)	• Lek monitoring occurred in CA and NV (RAM 1-1 to 1-3) • Vegetation protocols for treatments and sage-grouse habitat were compared to determine where additional measures may be needed. • Hired a part-time GIS/data manager through Great Basin Institute (Bishop BLM) • Telemetry studies were initiated or continued in the following areas across the Bi-State. This includes Bodie PMU (25 birds), South Mono PMU (30 birds), Desert Creek PMU (21 birds), Mt. Grant PMU (24 birds) and Pine Nut PMU (15 birds) (RAM 3-1 to 3-10) • Draft of CPT model paper sent to Ecological Applications
Maintain and improve stakeholder involvement (MSI 1 & 2)	• See totals for public awareness above. Highlights include: o 3 LAWG meetings held o Pinyon-Juniper conference held o Lek guidelines and brochure completed o Installed 2 interpretive signs in Long Valley
Livestock Grazing (HIR 1-5B, HIR 1-4PN, HIR 2-2PN)	• Communication- Mono County Board sent a letter to and then met with LADWP re: irrigation allotment for ranchers in S. Mono PMU for grazing and habitat purposes. • Compliance monitoring prioritized per grazing summary
Minimize and Eliminate Risks: Wildfire (MER 1-1 thru 1-9)	• Sage-grouse presentations at all fire refreshers for the INF/Bishop BLM • Sage-grouse Standard Operating Procedures (SOPs) implemented on the Walker Fire • Fire prevention patrols focused in Bodie and Long Valley • Bodie State Park drafted a fire plan to include sage-grouse SOPs

2015 Bi-State Sage-grouse Lek Monitoring Report

Overview

The Bi-State planning area is composed of six Population Management Units (PMUs) including the Pine Nut, Desert Creek/Fales, Mount Grant, Bodie Hills, South Mono and White Mountains. Movement of sage-grouse across state boundaries is known to occur within the Pine Nut, Desert Creek/Fales, Mount Grant/Bodie and the White Mountains PMUs. Relatively little is known regarding movement of birds and population size within the White Mountains PMU at the southernmost end of the Bi-State planning area. There are two known leks in the California portion of the White Mountains PMU in the southern end of the mountain range. The largest populations of sage-grouse within the Bi-State planning area exist within the Bodie Hills and the South Mono (Long Valley) PMUs.

Lek Status

Between California and Nevada, there are 101 known lek locations within the Bi-State conservation area, of which 48 are considered active currently [2 or more males observed during two years over a five year period (Connelly et al. 2003)]. In California there are 58 known leks with 31 leks considered active; however, the active lek status definition is sometimes difficult to apply to smaller satellite leks. In Nevada, 43 lek locations are known of which 18 are considered active according to the Connelly et al. (2003) definition. Lek locations in the Pine Nut PMU need continued refinement because many locations are one or two time observations of sage-grouse from aerial survey.

The total known number of leks may be somewhat misleading due to the presence of several leks considered "satellite leks" within California, particularly within the Bodie and South Mono PMUs as well as a few locations that need to either be followed up on or eliminated from the database. Table 1 describes our knowledge of sage-grouse leks within each PMU currently.

PMU Name	Known Lek Locations	Active Leks	Average Lek Size
Pine Nut	12	2	5.0
Desert Creek/Fales	20	8	16.4
Mount Grant	15	8	17.3
Bodie Hills	20	14*	36.9
South Mono	30	14	14.6
White Mountains	4	2	2.5
Totals:	101	48	21.2

Table 1. Known leks, activity and average lek size within the Bi-State sage-grouse conservation planning area. (*The Stringer Headwaters Meadow has not been counted since 2013 and has been active).

Population Performance

Nevada Lek Counts

Twenty-four leks were surveyed during the spring of 2015 in the Nevada portion of the Bi-State planning area. Of those, 15 leks had two or more males in attendance. Lek counts began on March 3, 2015 and concluded on April 5, 2015. A total of 45 visits were made to the 24 leks surveyed. The largest lek surveyed was the Rough Creek lek in the Mount Grant PMU with 46 males present while the smallest lek surveyed

was the Basalt Lek in the White Mountains PMU (2 males). The Mount Grant and Desert Creek PMUs have the largest number of known active leks with 8 each.

Lek attendance within the Nevada portion of the Bi-State planning area is somewhat difficult to draw conclusions from due to the consistency of lek counts over time. To get a more accurate depiction of population trend, lek counts from a subset of leks (n=7) with the most consistent data were used over the course of 15 years from 2001 through 2015. Average male attendance rates from these leks show a fairly stable trend over this period (Figure 1). The 15-year average male attendance rate was calculated at 21.9 males/lek and the 2015 attendance rate was 16.9% below that figure at 18.2 males/lek.

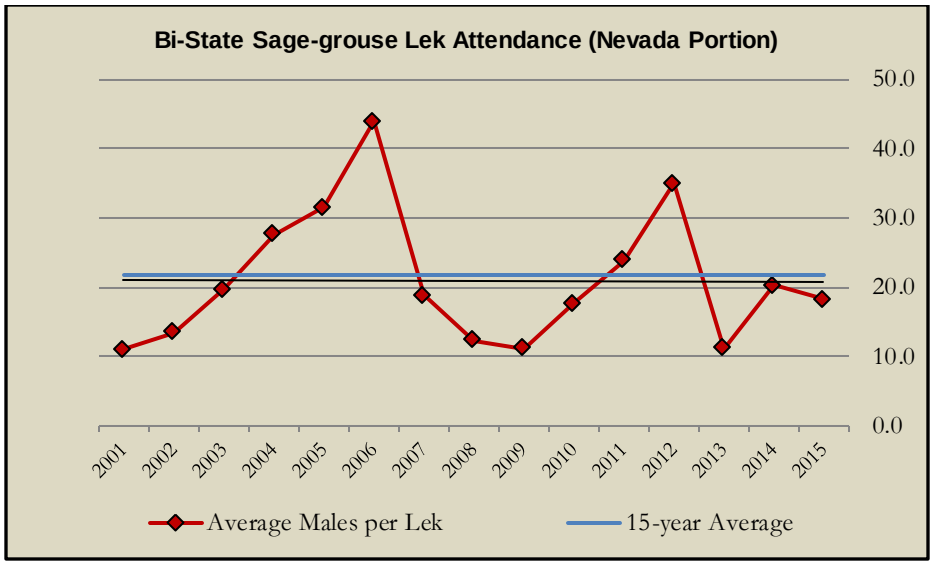

Figure 1. Male lek attendance within the Nevada portion of the Bi-State planning area from 2001-2015.

California Lek Counts

Within the Long Valley portion of the South Mono PMU, 15 leks (all 15 leks had ≥1 male in attendance) were surveyed and a peak total of 195 males were observed. This represented the third year in a row in which there was declining male attendance observed within Long Valley since reaching an all-time high of 418 males in attendance in 2012. The 2015 peak count of 195 males represented an 18.1% decrease from the number of grouse counted in 2014 and a 53% decrease from 2012. However, this population has exhibited a steadily increasing trend since 1965 (Figure 2).

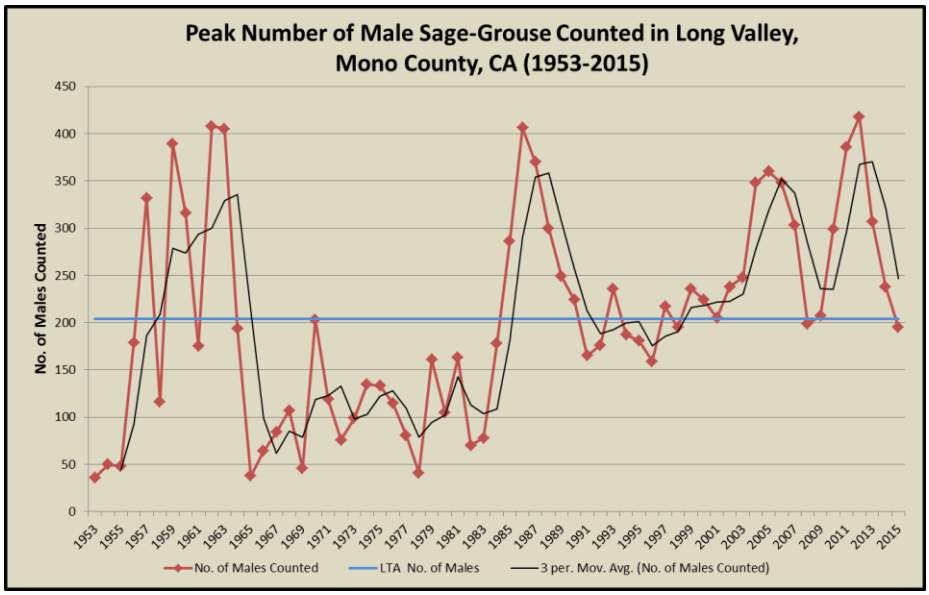

Figure 2. Male lek attendance within the Long Valley portion of the South Mono PMU from 1953-2015.

A total of 479 males were observed during lek counts conducted in the Bodie PMU in the spring of 2015. Eighteen leks were counted of which 14 had at least one male in attendance. The overall attendance in 2015 represented a slight dip from the 524 males observed in 2014 (17 leks counted; 14 with ≥1 male), which was also an all-time high for this particular PMU. This population has also exhibited a steadily increasing trend since 1953 (Figure 3).

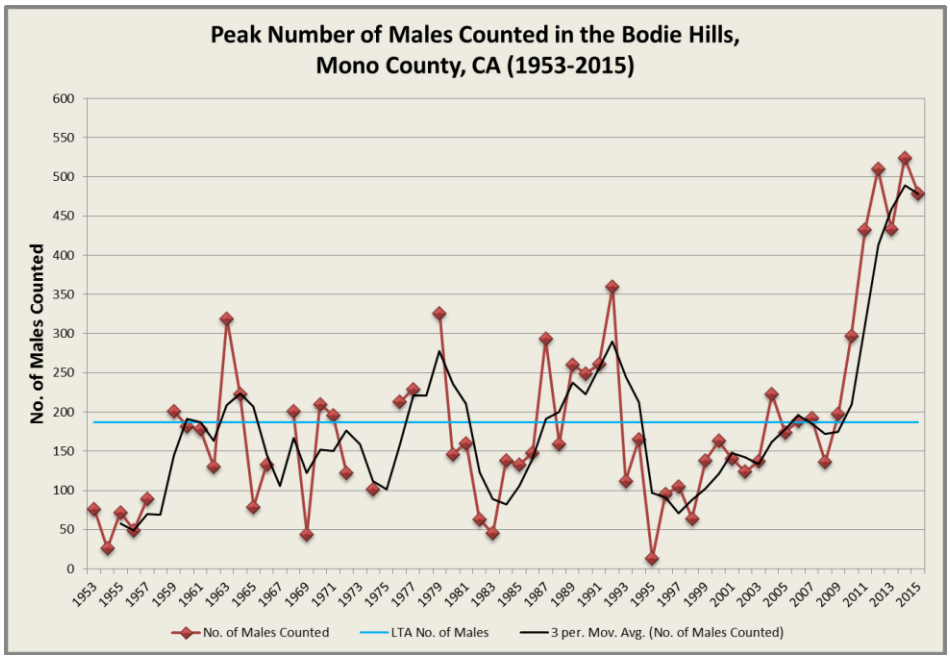

Figure 3. Male lek attendance within the Bodie Hill PMU from 1953-2015.

Comprehensive Lek Analysis

Average sage-grouse lek attendance within the Bi-State decreased by 17.5% from the previous year's average of 25.1 males per lek in 2014 to 20.7 males per lek in 2015 (Table 1). The only PMU where an increase was detected occurred in the Desert Creek/Fales PMU, and that increase was largely attributable to lek attendance increases within the California portion of the PMU (Wheeler Flat 3 and Jackass 1 Leks). No changes were detected within either the Nevada portions of the Pine Nut or the White Mountains PMUs; however, these populations are considered so small that marginal changes in population size are difficult to detect. Average male lek attendance within the stronghold populations of the Bi-State DPS, which includes the Bodie and South Mono PMU's, was down 8.4% and 19.3% respectively from 2014. These data were compiled from the Mono County Annual Lek History dataset from the California Department of Fish and Wildlife and the Nevada Department of Wildlife's Sage-grouse Lek Database.

PMU	Total Known Leks	# of Leks Surveyed	# of Active Leks	# of Males Counted	Avg. # of Males/Active Lek	Previous Year's Average	% Diff.
Desert Creek/Fales	20	11	8*	115	16.4	15.0	9.5%
NV Portion	(14)	(7)	(4)	(54)	(13.5)	(13.7)	-1.5%
CA Portion	(6)	(4)	(3)	(61)	(20.3)	(16.3)	25%
Mt. Grant (NV)	15	9	8	138	17.3	34.0	-49%
Pine Nut (NV)	12	3	2	10	5.0	5.0	0%
White Mtns. (NV)	4	2	2	5	2.5	2.5	0%
Bodie (CA)	20	18	14**	479	36.9	40.3	-8.4%
South Mono (CA)	30	21	14	205	14.6	18.1	-19.3%
TOTALS:	**101**	**64**	**48**	**952**	**20.7**	**25.1**	**-17.5%**

Table 2. 2015 lek count effort for the Bi-State local conservation planning area.
***One previously known active lek did not get surveyed in 2015 (Cowboy lek).**
****The Stringer Headwaters Meadow lek was not counted in 2015 so the number of active leks surveyed in 2015 was actually 13.**

Bi-State Sage-grouse Movement and Demographic Report (2012-2015)

Executive Summary

Various sage-grouse monitoring and movement projects took place between 2012 and 2015. The Bishop BLM office initiated a telemetry study to better understand habitat use by sage-grouse within the Bodie Hills, Mount Grant and South Mono Population Management Units (PMU) while the BLM – Carson District worked cooperatively with the USGS and Nevada Department of Wildlife to radio and GPS-satellite PTT mark sage-grouse within the Pine Nut PMU. Each of these projects yielded meaningful information pertaining to seasonal habitat selection, movement patterns and corridors, fire suppression techniques and recommendations as well as predator community composition and abundance.

The BLM Bishop effort was undertaken in partnership with the Nevada Department of Wildlife, California Department of Fish and Wildlife, Humboldt-Toiyabe National Forest, Inyo National Forest and the U. S. Geological Survey. The primary goal of the project was to better understand sage-grouse habitat use in areas where telemetry information was lacking, minimal or dated. Some key preliminary findings include:

- Unsuspected long distance movements:
  - Two birds captured by the USGS near Mt. Grant in October of 2012 moved 24 and 32 miles respectively to the Bodie Hills to nest.
  - Three birds captured in the Pine Nuts PMU moved 46 to 52 miles from capture location to nesting locations in the Bodie Hills.
- Nesting habitat - characterized by shrub cover that was significantly (ANOVA $p < 0.05$) different between the study areas (Mt. Grant average shrub cover being the lowest at 14.8%).
- Fire Suppression: the successful protection of islands of sagebrush during wildfire suppression and intentionally retaining finger like boundaries resulted in a mosaic of habitat that was used by grouse for nesting and brood rearing.
  - The sagebrush islands were used year-round by sage-grouse.
  - Incorporating these fire suppression techniques results in a post fire landscape that retains more habitat for grouse than traditional "burn out" techniques. This approach has been incorporated into standard fire protocols.

For the full report, please see Appendix B available upon request or on the Bi-State Sage-grouse website (link).

In addition, during 2011–15, USGS research crews radio- and Global Positioning System (GPS)-marked (2012–2014 only) 31, 45, 18, 7, and three sage-grouse, respectively, in the Pine Nut PMU. Preliminary findings indicate that pinyon-juniper is avoided by sage-grouse during every life stage. Nesting females selected increased sagebrush cover, sagebrush height, and understory horizontal cover, and brood-rearing females selected similar areas but also preferred increased perennial forb abundance. Using maximum likelihood estimation, nest survival during 2011–14 was 23.8 percent (95-percent confidence interval=10.3–40.6 percent) and appeared lower for the Pine Nut Mountains PMU than for other populations range-wide. Alternatively, 50-day brood survival was 53.8 percent (95-percent confidence interval=30.0–73.4 percent) and appeared higher for the Pine Nut Mountains PMU than for other populations range-wide, but was quite variable. During 2011–14, 146, 222, 224, and 104 raptor/raven surveys were completed, respectively, and results indicate a greater number of raven detections (n=464) in the Pine Nut Mountains PMU than at other study areas in Nevada. These data will be used to develop a predator index. Movement corridors between seasonal habitats were identified with one sage-grouse traveling

greater than 100 kilometers south to the Bodie Hills for the winter season. For the full report, please see Appendix C available upon request or on the Bi-State Sage-grouse website (link).

Vegetation Monitoring within the Bi-State Conservation Area

The Nevada Partners for Conservation and Development (NPCD) is housed and coordinated from the Nevada Department of Wildlife (NDOW) and the mission of the NPCD is to implement habitat restoration projects and to demonstrate the effectiveness of the projects. Currently, the NPCD is working on numerous habitat projects across northern Nevada and in the Bi-State sage-grouse PMUs. At a given habitat project site, the NPCD establishes numerous vegetation sampling locations both within the treatment and also in adjacent areas not intended to be treated. The nontreated sites serve as control sites against which the projects' results may be judged. Sampling is conducted prior to treatments to establish baseline conditions for as many years as possible in an effort to account for interannual climate variation, then the same sites are visited following treatments. The various comparisons between pre and post treatment sites as well as comparisons of treated to control sites allows for project effects to be determined.

In order to show project effects to the vegetation, the NPCD is implementing a statistically rigorous and ecologically meaningful monitoring protocol (Laycock 1987; Elzinga et al. 2000; Bestelmeyer et al. 2005; Forbis et al. 2007; Turner et al. 2010). The methods NPCD employs are consistent with the BLM's Assessment, Inventory and Monitoring (AIM) (Taylor et al. 2014), the USGS Chronosequence (Knustson et al. 2009), the BLM's Emergency Stabilization and Rehabilitation (ES&R) and the USFS's Burn Area Emergency Response (BAER) (Robichaud, Beyers and Neary 2000). The NPCD's methods are designed to be simple to replicate and require little or no expensive equipment in an effort to increase the likelihood for ongoing resampling of vegetation survey sites into the future. One requirement is that all personnel know the plant species in the area very well and the NPCD hires crews each year with these skills.

Through 2015, the NPCD has surveyed approximately 500 plots across the Bi-State PMUs (Figure 1). Sampling was initiated in 2011 for the Pine Nut Mountains, Longdoctor and the China Camp project sites and these project locations now have rich data sets showing pre and post treatment effects. Figures 2 and 3 show pre and post treatment photos in the Pine Nut and China Camp project sites. Preliminary analyses indicate an increase in perennial grass cover/abundance. 2014 and 2015 were drier winters and there has not been a change in perennial forb cover abundance. It is expected that the relatively wet 2015-2016 winter will provide the moisture necessary to allow for some perennial forb increases. Since 2011, numerous projects have been proposed and are in various stages of planning and implementation. The NPCD is working to provide project effectiveness monitoring at as many projects as is practical.

The methods are described briefly below. Survey crews navigate to sampling locations using GPS and GIS. Sampling sites consist of three 50 meter transects oriented at 0, 120 and 240 degree compass bearings. Once at the sampling location, all plants found within the perimeter of the site are identified to species. Photographs are taken along each 50 meter transect (Bonham 1989), foliar cover by species is measured via line point intercept along 50 meter transects (Canfield 1941) and the height of shrubs and perennial grasses/forbs is measured along each transect. Gaps in the perennial vegetation canopy are measured and a 2 meter X 50 meter belt transect is measured to count shrubs and trees and place individuals into various size categories (Elzinga, Salzer and Willoughby 2000). The measures employed provide a complete picture of the vegetation including species at each site, all noxious or other nonnative plants, percent cover of all species, structure (height) of the shrubs and perennial understory and density by species (Daubenmire 1959; Elzinga, Salzer and Willoughby 2000; Bestelmeyer et al. 2005; Forbis et al. 2007).

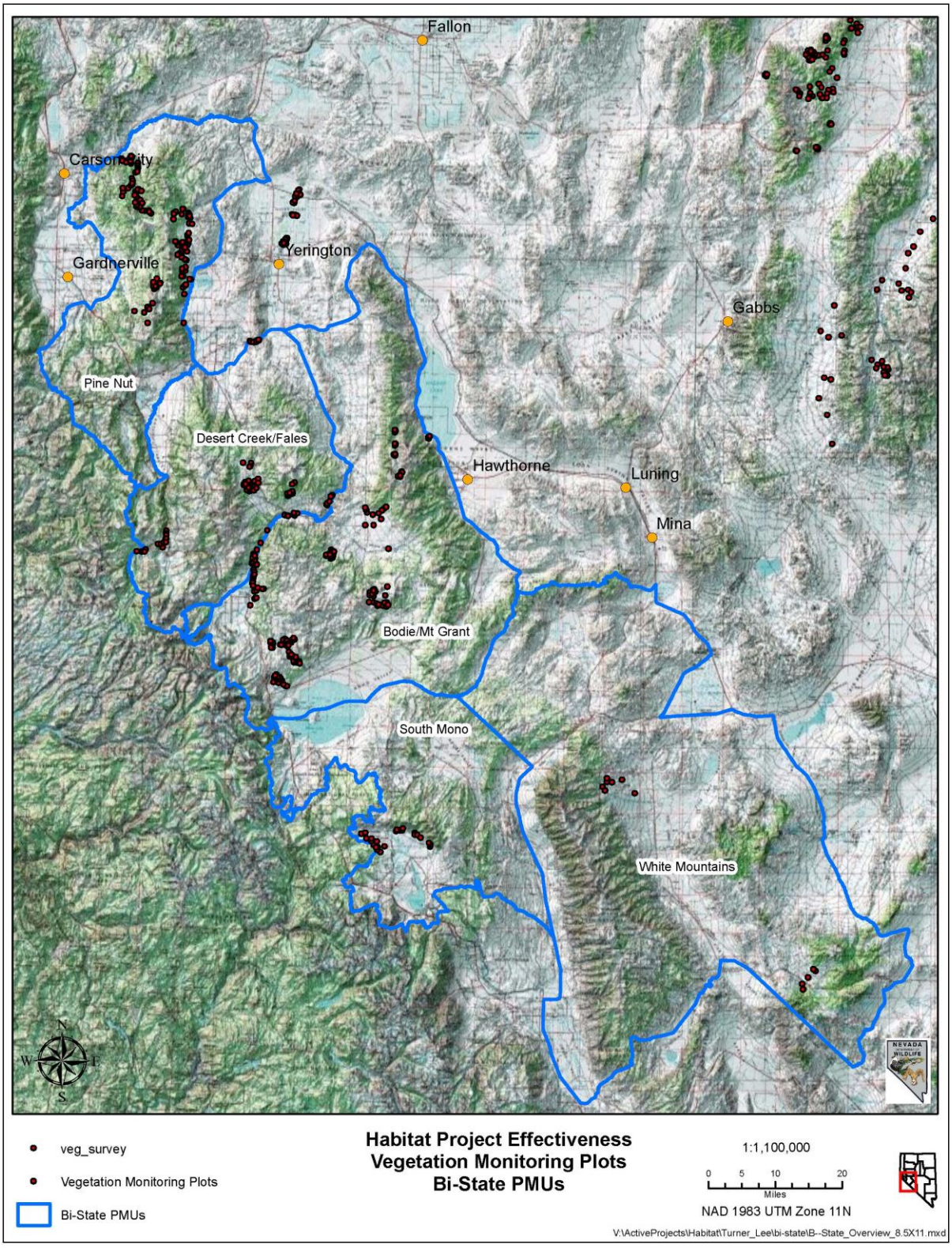

Figure 1. Habitat project effectiveness monitoring plots across the Bi-State PMUs.

Figure 2. Pine Nut Mountains pinyon-juniper removal project. Top photo shows Plot #18 in 2011 pre-treatment with phase II PJ. Lower photo is post-treatment from 2015 showing Plot#18. Preliminary analyses indicate an increase in perennial grass cover with little change in perennial forbs.

Figure 3. China Camp Lek sites pinyon-juniper removal project. Top photo shows Plot #1 in 2011 pre-treatment with phase II PJ. Lower photo is post-treatment from 2015 showing Plot#1. Preliminary analyses indicate an increase in perennial grass cover with little change in perennial forbs.

Citations

Bestelmeyer, B., Trujillo, D., Tugel, A., Havstad, K. 2002. A multi-scale classification lf vegetation dynamics in arid land: What is the right scale for models, monitoring and restoration. *Journal of Arid Environments* 65:296-318.

Bonham, C. 1989. Measurements for Terrestrial Vegetation, John Wiley and Sons, 338 p.

Canfield, R.H. 1941. Application of the line interception method in sampling range vegetation. J. Forestry 39:388-394.

Daubenmire, R. 1959. A Canopy-Coverage Method of Vegetational Analysis. Northwest Science 33;43-64.

Elzinga, C., Salzer, D. and Willoughby, J. 2000. Measuring and Monitoring Plant Populations. BLM Technical Reference 1730-1. BLM/RS/ST-98/005+1730.

Forbis, T., Provencher, L., Turner, L., Medlyn, G., Thompson, J. and Jones, G. 2007. A Method for Landscape-Scale Vegetation Assessment: Application to Great Basin Rangeland Ecosystems. *Rangeland Ecology and Management* 60:209-217.

Knutson, K., Pyke, D., Wirth, T., Pilliod, D., Brooks, M., and Chambers, J.2009. A chronosequence feasibility assessment of emergency fire rehabilitation records within the Intermountain Western United States—Final Report to the Joint Fire Science Program—Project 08-S-08: U.S. Geological Survey Open-File Report 2009-1099, 20 p.

Laycock, W.A. 1987. Setting Objectives and Picking Appropriate Methods for MonitoringVegetation on Rangelands. Rangeland Monitoring Workshop Proceedings. U.S. Department of Interior. Bureau of Land Management. Golden, CO.

Robichaud, P., Beyers, J. and Neary, D. 2000. Evaluating the effectiveness of postfire rehabilitation treatments. Gen. Tech. Rep. RMRS-GTR-63. Fort Collins: U.S. Department of Agriculture,
Forest Service, Rocky Mountain Research Station. 85 p.

Taylor, J., Kachergis,E., Toevs, Karl, G., Bobo, M., Karl,M., Miller,S., and Spurrier, C. 2014. AIM-Monitoring: A Component of the BLM Assessment, Inventory, and Monitoring Strategy. Technical Note 445. U.S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, CO.

Turner, L., Pellant, M., Pyke, D., Swanson, S., Chambers, J., Forbis, T. and Herrick, J. 2010. Nevada Partners for Conservation and Development Pre and Post Habitat Treatment Vegetation Sampling Protocol.

Bi-State Livestock Grazing Assessments

The Bishop BLM Field Office and USFS – Humboldt-Toiyabe National Forest developed a spreadsheet (Appendix D) in October 2014 that includes 149 allotments within the Bi-State DPS. Of those 122 are active, 13 vacant, 9 inactive and 5 allotments are in non-use and include approximately 1.35 million acres in federal ownership within the Bi-State DPS priority habitat. The spreadsheet contains information pertaining to annual allotment compliance monitoring, long-term trend monitoring, rangeland health assessment or equivalent and whether or not the allotment is meeting standards or some equivalent in both the upland and riparian areas. The spreadsheet includes the following information:

- Use Status – Active, Inactive, Non-use or Vacant
- Last Year Used
- Allotment Acreage (total, non-USFS/BLM acreage, acreage within Bi-State DPS and within each PMU
- Allotment Resource Selection Function Value
- Season of Use
- Kind of Livestock
- Permitted Livestock Use Standard
- Active Grazing Management or Allotment Management Plan in Place
- Special Range Improvements
- Terms and Conditions to benefit Sage-grouse (enforcement)
- Annual Allotment Compliance Monitoring (has it occurred in the last 3 years, in compliance with terms and conditions, if not, what has to be done to remedy the problem?)
- Long-term Trend Monitoring (number of plots, type of monitoring, condition of trend, livestock significant causal factor)
- Rangeland Health Assessment or Equivalent (date of last assessment, methodology, relevance to sage-grouse)
- Meeting Standard or Equivalent (upland, riparian, progress towards)
- Rangeland Standards and Practices being applied
- Allotments contains riparian, wet meadows or springs (yes/no)
- Wild Horse and/or Burro Use
- Other Allotment Notes

The most current spreadsheet indicates the following with respect to determinations as to whether or not allotments are meeting standards or some equivalent:

	Meeting (Yes)	Not Meeting (No)	NA	% Meeting	% Not Meeting
UPLAND	97	13	39	88%	12%
RIPARIAN	54	32	63	63%	37%

For the upland portion of those allotments not meeting rangeland health standards (n=13), 4 allotments were making significant progress towards meeting those standards, 7 were not assessed as to whether or not they were making progress and two were not making progress. Of the 32 allotments where the riparian portion was not meeting rangeland health standards, 30 were making significant progress towards meeting those objectives while just two were not.

Bi-State Conifer Removal Project Ranking (Northern Portion)

Introduction

A meeting was held on March 24, 2015 to assess the rankings of conifer projects that were evaluated using the Conservation Planning Tool (CPT or model). This was determined to be necessary because the model is designed to inform the rankings, then incorporate local knowledge and other factors to determine the final rankings. This ranking should occur yearly to ensure that, as we learn more about the habitat and treatment success or failure, we adapt our priorities if necessary.

Methods

These are the steps to assess the polygons.

1) Discuss recent finding from Conifer Conference in Minden (Managing Pinyon-Juniper Expansion in Sagebrush Ecosystems: Next Steppe for the Bi-State, February 2015) such as: Bird avoidance at low levels of expansion and emphasis on Phase 1 and 2 removal.
2) Review existing ranking from CPT using the SGI (sage-grouse index in the geodatabase) rank only. The relative cost benefit ranking was not used as we wanted to focus on bird benefit first.
3) Determine new priorities, if necessary, based on local knowledge of habitat and bird use, and implementation realities and priorities the model doesn't address.
4) Document the results.

All proposed conifer areas were reviewed, looking at CPT ranking, lek locations and attendance, telemetry data and imagery (to assess conifer expansion). We discussed resistance and resilience (in relation to local knowledge of the area and existing cheatgrass infestations) of the polygons and how that might relate to methods and prioritization. We also discussed past and present land uses and how that might impact the prioritization or methods as well as how existing NEPA processes incorporated certain polygons currently that may not have ranked highly from a CPT perspective.

Based on this discussion we re-ranked the polygons and added some new ones. Figure 1 (Attached) depicts the ranks in the CPT vs. the new ranks and Figure 2 (Attached) depicts the final prioritization for the northern half of the Bi-State. Below are the highlights of findings, in order of priority for completion. Also, most of these projects have been clumped as this is a more landscape scale approach to looking at conifer treatments. Therefore, some projects that ranked lower are grouped with those that ranked higher, so that NEPA may be completed at a larger scale. The top 12 projects identified were:

1) Dry Lakes/Big Flat – near two of largest leks in Bi-State
2) Green Creek, Mormon Meadow, Bridgeport Canyon – numerous leks in vicinity
3) East Walker and Sweetwater Ranch – important habitat for all life stages
4) Rough Creek and China Camp – expands and connects existing habitat
5) Jackass Flat – adjacent to leks
6) Railroad Grad and Cottonwood Canyon – within 3 miles of several leks
7) Aurora and Powell Mountain –
8) Desert Creek – near several leks and NEPA in progress
9) Lapon Canyon – near Nine Mile leks
10) Upper Summers – adjacent to existing treatments
11) Western Sweetwater, Cottonwood Creek – improves connectivity
12) Aurora to Alkali, Bodie Hills – improves connectivity

Attendance

- Inyo NF: Heather Stone, Interagency Fuels Planner
- Humboldt-Toiyabe NF: Joanne Lowden
- Carson BLM: Chris Kula
- Bishop BLM: Sherri Lisius, Wildlife Biologist
- Great Basin Institute/Bishop BLM: Kim Mitchell
- NDOW: Jason Salisbury, Shawn Espinosa
- NRCS: Katrina Krause

Discussion

The re-ranking of the units resulted in more refined ranking that factors local knowledge into the modelling. We determined that grouping the individual units made more sense from a logistical standpoint. It afforded a more landscape approach for NEPA and also increased efficiencies with regard to surveys and contractors. Once the group hit the top 12, it was more and more difficult to determine what should rank higher. Additionally, the top 12 will take several years to complete, so unless new information indicates a need to rank these more diligently, the units ranked 12-21 are not differentiated much in the ranking.

Bi-State Conifer Removal Project Ranking (Southern Portion)

Introduction

A meeting was held on March 4, 2015 to assess the rankings of conifer projects that were evaluated using the Conservation Planning Tool (CPT or model). This was determined to be necessary because the model is designed to inform the rankings, then incorporate local knowledge and other factors to determine the final rankings. This ranking should occur yearly to ensure that, as we learn more about the habitat and treatment success or failure, we adapt our priorities if necessary.

Methods

These are the steps to assess the polygons.

1) Discuss recent finding from Conifer Conference in Minden (Managing Pinyon-Juniper Expansion in Sagebrush Ecosystems: Next Steppe for the Bi-State, February 2015) such as: Bird avoidance at low levels of expansion and emphasis on Phase 1 and 2 removal.
2) Review existing ranking from CPT using the SGI (sage-grouse index in the geodatabase) rank only. The relative cost benefit ranking was not used as we wanted to focus on bird benefit first.
3) Determine new priorities, if necessary, based local knowledge of habitat and bird use, and implementation realities and priorities the model doesn't address.
4) Document the results.

All proposed conifer areas were reviewed, looking at CPT ranking, lek locations and attendance, telemetry data and imagery (to assess conifer expansion). We discussed resistance and resilience (in relation to local knowledge of the area and existing cheatgrass infestations) of the polygons and how that might relate to methods and prioritization. We also discussed past and present land uses and how that might impact the prioritization or methods. Based on this discussion we re-ranked the polygons and added some new ones. Table 1 provides a detailed list of the results. Figure 1 depicts the ranks in the CPT vs. the new ranks and Figure 2 depicts the final prioritization for the southern half of the Bi-State. Below are the highlights of findings, in order of priority for completion.

1. **Expanded and Combined Long Valley units.** These units ranked the highest because they provide the most benefit for the most birds and will be relatively inexpensive to complete as they are Phase I expansion.
    a. Need to evaluate expanding to include other ownerships aside from USFS.
2. **Parker units.** These are new units. These were a high priority based on the potential translocation and the vulnerability of the populations.
    a. Group suggests increasing the units to the North and South.
    b. Field trip for ground truthing needed.
    c. Also meadow restoration and fuelbreaks could be treatments in this area.
    d. DWP lands may be included, need to invite them on the field trip.
3. **Sagehen Summit**. Ranked high due to small population, known grouse use, Phase I Jeffrey pine expansion.
    a. Add unit to the east in IRA.
    b. Ground truthing necessary.
4. **White Mountain Telemetry Study.** It became very clear we needed more information to assess treatment areas here. It is proposed this is our 4th highest priority because we don't have the data or local knowledge to assess the polygons and treatment would be difficult due to terrain. Contact NDOW (Tom Donham) regarding corporate knowledge for grouse in this area.

5. **Hilton Creek (Permanent ID 427)**. Ranked moderate based on minimal but confirmed grouse use and positive response to historical vegetation treatments in the area.
    a. Look at expansion of unit to tie in with fuelbreak to the east and incorporate if necessary.
6. **Clover Patch (Permanent ID 424).** This project ranked moderate because there is some known use by grouse, but it is not considered as important.
    a. Evaluate project for meadow treatment as well as conifer treatment.
7. **White Mountains**. Ranked low due to lack of information about the birds.
    a. New units may be recommended (especially in the south) when more bird data ia available.
8. **Benton Range** (Waterson Meadows to Black Lake). These ranked low due to lack of current bird use. Ground truthing may be needed. These would be good to treat after the higher priority ones.
9. **Pizona.** This area ranked low due to the lack of current bird use nearby and the heavy expansion of pinyon indicating it would be difficult to treat.

Discussion

Rankings of the best and worst polygons were consistent with the CPT. However, based on local knowledge and implementation strategies (such as combining all Long Valley units) the ones that ranked in the middle moved around a bit. The model could use a better vegetation base layer, as some of the rankings seemed low because the area was not identified as mountain sage. Monitoring of treatment efficacy should be included as a separate line item in budgets for the projects.

APPENDIX A

BI-STATE PROJECT ACCOMPLISHMENTS

Project ID	RISK ADDRESSED - Project Type	ESA Listing Factor[1]	# of Projects	Sites, Miles or Acres Treated	Project Locations[2]	PMU: High/ Moderate Threat[2]
PINYON-JUNIPER ENCROACHMENT						ALL PMUs
Pinyon-Juniper removal: mechanical and burning		A, C	10	7592 acres	B, DCF, MG, PN, SM	
400	*EQIP Contract to treat private land in Pine Nut Land Health Project area*			*104*	*Pine Nut*	
512	*East Walker Landscape Habitat Improvement Project Units A & C*			*2405*	*Desert Creek/Fales*	
513	*East Walker Landscape Habitat Improvement Project Units F & B*			*875*	*Mount Grant*	
517	*Long Doctor PJ Removal Maintenance*			*50*	*Desert Creek/Fales*	
526	*Private Lands-EQIP programs: PJ removal*			*60*	*Desert Creek/Fales*	
527	*Arcularius Jeffrey Pine Removal*			*373*	*South Mono*	
532	*Aurora Canyon Pinyon Maintenance*			*24*	*Bodie*	
560	*EQIP contract to treat Crest Unit of Pine Nut Land Health Project-PJ Removal*			*706*	*Pine Nut*	
614	*Pine Nut Land Health Project - Mill Canyon unit* in progress*			*2412*	*Pine Nut*	
615	*Pine Nut Land Health Project - Bald Mountain unit *in progress*			*583*	*Pine Nut*	
WILDFIRE						ALL PMUs
Wildfire: rehabilitation		A	6	1676 acres	B, MG, SM	
514	*Spring Peak Fire Rehab PJ Removal.*			*557*	*Mount Grant*	
515	*Spring Peak Fire Rehabilitation Sagebrush Planting.*			*885*	*Mount Grant*	
579	*Green Creek Fire rehabilitation 2015*			*27*	*Bodie*	
593	*Indian Fire Treatment-Planting 2015*			*5*	*South Mono*	
594	*Indian Fire Treatment-Seeding 2015*			*67*	*South Mono*	

596	*Spring Peak Fire Treatment-Seeding 2015*			*135*	*Bodie*	
Wildfire: fuels reduction		A	1	656 acres	PN	
613	*Pine Nut Land Health Project - Sunrise unit*			*656*	*Pine Nut*	
URBANIZATION						ALL (except MG)
Conservation easements		A	4	7056 acres	B, DCF, PN	
72	*Private Land Easement CA#5: Sierra Land and Sheep*			*2040*	*Bodie*	
111	*Private Land Easement-NV #3 Sceirine Fredricks Ranch*			*999*	*Desert Creek/Fales*	
112	*Private Land Easement NV #4 Remainder of Sweetwater Ranch*			*3443*	*Desert Creek/Fales*	
468	*Wade-Fernley Ranch*			*574*	*Pine Nut/Desert Creek/Fales*	
INFRASTRUCTURE						ALL (except WM)
Fences: modification, removal, marking		A	11	18 miles	B, DCF, MG, SM	
503	*Sweetwater Flat Fence Marking 2015*			*3.3*	*Desert Creek/Fales*	
508	*Parker Meadow Fence Removal*			*1.5*	*South Mono*	
519	*East Walker Fence Marking 2015*			*4.1*	*Desert Creek/ Mount Grant*	
521	*Wheeler Creek Fence Marking 2015*			*2.2*	*Desert Creek/Fales*	
523	*Sinnamon Meadows-Fence Marking*			*2.5*	*Bodie*	
524	*Sinnamon Meadows-Fence Removal*			*0.6*	*Bodie*	
552	*Bodie Bowl Fence Removal*			*0.5*	*Bodie*	
553	*Conway Ranch Fence Removal*			*0.4*	*Bodie*	
580	*Conway Ranch Exclosure Fence Marking*			*<1.0*	*Bodie*	
581	*Conway Ranch Derelict Fence Removal 2015*			*0.4*	*Bodie*	
618	*Parker Fence Removal*			*2.0*	*South Mono*	
Roads: closures		A, D, E	11	7 miles, 71 sites	B, SM	

522	*Long Valley Restoration Hill Climb*			*0.6*	*South Mono*	
573	*Long Valley Closure hardening*			*0.4*	*South Mono*	
574	*Long Valley Dispersed campsite road closure and harden*			*0.6*	*South Mono*	
575	*Long Valley Shepherd's Tub road grading*			*0.6*	*South Mono*	
576	*Long Valley Shepherd's Tub road closure hardening*			*0.1*	*South Mono*	
577	*Long Valley Shepherd's Tub Seasonal road closure now permanent*			*0.4*	*South Mono*	
578	*Long Valley Corner cut road hardening*			*0.1*	*South Mono*	
609	*Inyo National Forest Road Closures 2015*			*3.7*	*Bodie, South Mono*	
619	*Doe Ridge Hill Climb #1*			*0.3*	*South Mono*	
616	*Inyo NF road closure hardening/block points*			*70 sites*	*Bodie, South Mono*	
617	*DWP Seasonal Closure of Long Valley Leks 2015*			*1 site*	*South Mono*	
GRAZING						
Wild Horses		A	3	3	SM	
622	*Wild Horse Accomplishments, 2015 INF, horse counts*			*3*	*South Mono*	
Livestock exclusion		A	15	441 acres, 1.5 miles	B, DCF, PN	
18	*Upper Bodie Creek Riparian Pasture*			*43.2*	*Bodie*	
48	*Aspen B1072 Exclosure*			*2.8*	*Bodie*	
49	*Artesian Spring Exclosure*			*0.2*	*Bodie*	
51	*Murphy Meadows Exclosure #2*			*0.2*	*Bodie*	
52	*Aspen P1094 Exclosure*			*1.9*	*Bodie*	
53	*7 Troughs Riparian Pasture*			*277.0*	*Bodie*	
54	*Fourway Meadow Exclosure*			*2.4*	*Bodie*	
55	*N. Potato Peak Meadow Exclosure*			*6.7*	*Bodie*	
56	*Aspen P1094A Exclosure*			*1.6*	*Bodie*	
57	*Aspen B1075 Exclosure*			*1.2*	*Bodie*	
58	*Aspen B1076 Exclosure*			*1.7*	*Bodie*	

59	*Upper Geiger Meadow Exclosure*			*18.3*	*Bodie*	
60	*Geiger Meadow #1 exclosure maintenance*			*3.1*	*Bodie*	
61	*Geiger Meadow #2 exclosure maintenance*			*0.9*	*Bodie*	
497	*Wheeler Flat Enclosure Fence Maintenance and Construction*			*80.0*	*Desert Creek/Fales*	
621	*Sunrise Allotment Riparian Enclosures, fence installed and marked*			*1.5 miles*	*Pine Nut*	
Fence construction		A	1	1 site	B	
587	*Aurora Canyon Electric Fence*			*1 site*	*Bodie*	
INVASIVE AND NOXIOUS SPECIES						PN, MG
Invasive and noxious weed control		A	4	111 acres	B, DCF, MG, SM	
551	*Bodie Fire Invasive Plant Removal*			*93*	*Bodie*	
554	*Conway Ranch Invasive Species Removal*			*1*	*Bodie*	
557	*2015 Smith Valley Conservation District Weed Treatments*			*17*	*Desert Creek/Fales, Mount Grant*	
610	*Inyo NF 2015 Noxious and Invasive Weed Management*			*1*	*South Mono*	
Invasive and noxious weed inventory		A	1	674 acres	DCF, MG	
558	*2015 Smith Valley Conservation District Weed Treatments*			*674*	*Desert Creek/Fales, Mount Grant*	
HABITAT-BASED THREATS						DCF
Loss of sagebrush/meadows: Restoration		A	7	419 acres	B, DCF, MG, SM	
62	*Kirkwood Meadow Irrigation and reconstruction of structures*			*249*	*Bodie*	
114	*Private Lands-EQIP/WHIP programs. Willow treatment*			*90*	*Desert Creek/Fales*	
119	*Flying M Range-Baldwin Field Sage-grouse Habitat Restoration Study/Demonstration, 3 seeded plots and Fuelbreak*			*19*	*Mount Grant*	

502	*Shepherd's Tub Vegetation Restoration*			*0*	*South Mono*	
518	*Wheeler Creek Meadow Restoration*			*33*	*Desert Creek/Fales*	
520	*China Camp Meadow Restoration*			*27*	*Mount Grant*	
586	*Green Creek Materials Pit restoration*			*1*	*Bodie*	
Loss of sagebrush/meadows: Field Exam		A	2	2 events	B	
530	*Field Exam with Sherm Swanson to assess riparian areas*			*1*	*Bodie*	
588	*Aurora Canyon Road Hydrology Restoration Field Trip*			*1*	*Bodie*	
PUBLIC AWARENESS						DCF
Outreach: Educational signs installed		N/A	1	2 signs	SM	
221	*Educational Signs at the Green Church and Brown's Campground*			*2*	*South Mono*	
Outreach: News & Media		N/A	10	10 outreaches	B, DCF, MG, PN, SM	
531	*Saving Sagebrush to Protect Sage-Grouse*			*1*	*Multiple PMUs*	
534	*Bodie Hills Stewardship Blog*			*1*	*Bodie*	
535	*Bodie Hills Stewardship SGI article*			*1*	*Bodie*	
536	*Wildfire and Sage-Grouse in the Bishop BLM: BLM Newsbytes*			*1*	*Bodie*	
538	*Bi-State Sage-Grouse Pinyon Forum outreach*			*1*	*Multiple PMUs*	
539	*Ranchers Perspective: Outreach in Newspaper & SGI*			*1*	*Multiple PMUs*	
540	*Bi-State Sage-Grouse not listed-Webstory plus*			*1*	*Multiple PMUs*	
541	*Bay Nature Article*			*1*	*Multiple PMUs*	
543	*Bi-State Video*			*1*	*Multiple PMUs*	

544	*Featured Friend SGI Bishop BLM*			*1*	*Multiple PMUs*	
Outreach: Field Trips, Meetings, Educational Talks		N/A	21	45 events	B, DCF, MG, PN, SM	
510	*Minden NRCS SGI SWAT Workshop*			*1*	*Multiple PMUs*	
511	*Audubon Christmas Program on BSSG*			*1*	*Multiple PMUs*	
528	*Long Valley Tribal Forum*			*1*	*South Mono*	
537	*Bi-State Pinyon-Juniper Expansion Forum*			*1*	*Multiple PMUs*	
545	*International Sage-Grouse Forum-Presentation Dan Hottle (FWS)*			*1*	*Multiple PMUs*	
547	*Adobe Field Tour*			*1*	*South Mono*	
548	*Parker Meadow Field Tour*			*1*	*South Mono*	
550	*Presentation on the BSSG to the LA Audubon in Bishop*			*1*	*Multiple PMUs*	
556	*Indian Fire seeding Volunteer Event*			*1*	*South Mono*	
563	*Mono County Lek Tour and Training*			*1*	*Multiple PMUs*	
565	*California Counties Planning Commissioner's Conference*			*1*	*Multiple PMUs*	
566	*Mono County General Plan public meetings - 15 meetings*			*15*	*Multiple PMUs*	
567	*2015 Association of Environmental Professionals (AEP) Conference*			*1*	*Multiple PMUs*	
584	*Executive Oversight Committee Meetings*			*7*	*Multiple PMUs*	
602	*Local Area Working Group Meetings*			*3*	*Multiple PMUs*	
603	*Pine Nut Project, Tribal Member Tours*			*1*	*Pine Nut*	
604	*Pine Nut Project, Rotary Club Presentation*			*1*	*Pine Nut*	
605	*Pine Nut Project Field Tour with Assistant Secretary of Interior*			*1*	*Pine Nut*	
606	*Pine Nut Project, Field tour with NCCS regional director*			*1*	*Pine Nut*	

607	*Traditional Ecological Knowledge Summit Planning Committee*		*1*	*Multiple PMUs*	
608	*Traditional Ecological Knowledge Tribal Listening Sessions*		*3*	*Multiple PMUs*	