

Forest Service Greater Sage-grouse Monitoring Annual Report
First Year Summary: September 2015-September 2016



31 March, 2017

Background

The Greater Sage-Grouse ROD Monitoring Appendix lists major categories for monitoring during the implementation of the Amendment.

- A. Implementation (Decision) Monitoring.
- B. Habitat Monitoring.
 - Measure 1: Sagebrush Availability (percent of sagebrush per unit area)
 - Measure 2: Habitat Degradation (percent of human activity per unit area)
 - Measure 3: Energy and Mining Density (facilities and locations per unit area)
- C. Population (Demographics) Monitoring.
- D. Effectiveness Monitoring

Effectiveness Monitoring identifies various land agency contributions to habitat loss and calculates the trend of the above metrics over time by posing a series of additional questions:

1. Sagebrush Availability and Condition:
 - a. What is the amount of sagebrush availability (existing vegetation) and the change in the amount and condition of sagebrush at large and mid to small scales?
 - b. What is the existing amount of sagebrush on the landscape and the change in the amount relative to the pre-EuroAmerican historical, and potential, distribution of sagebrush (Biophysical potential)?
 - c. What is the trend and condition of the indicators describing sagebrush characteristics important to sage-grouse?
2. Habitat Degradation and Intensity of Activities:
 - a. What is the amount of habitat degradation and the change in that amount?
 - b. What is the intensity of activities and the change in the intensity?
 - c. What is the amount of reclaimed energy-related degradation and the change in the amount?
3. What is the population estimation of sage-grouse and the change in the population estimation?
4. How are the BLM and the Forest Service contributing to changes in the amount of sagebrush?
5. How are the BLM and the Forest Service contributing to disturbance?
6. Is the Amendment effective?
 - a. Is this plan meeting the sage-grouse habitat objectives?
 - b. Are sage-grouse areas within the LUP meeting, or making progress toward meeting, land health standards, including the Special Status Species/wildlife habitat standard?
 - c. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
 - d. Are the sage-grouse populations within this plan boundary and within the sage-grouse areas increasing, stable, or declining?

To satisfy these monitoring requirements, Region 4, in collaboration with Regions 2 and 1, has collected required information from various sources, with particularly close cooperation with the BLM. The results follow in tabular form, referencing the above items. Additional, related information, when available, will be added within appendices to this document. This document will be updated annually and will build into a comprehensive report for the Fish and Wildlife Service review in 2020. Because of the ongoing nature of projects and modifications of GIS and other databases, all figures in this report may be revised in future versions. For comments and corrections contact John Shivik (johnashivik@fs.fed.us).

Table 1. Implementation Monitoring (Item A)

Number of authorizations (NEPA decisions) and associated conditions or restrictions (e.g., efforts to avoid, minimize, or compensatory mitigate) in PHMA and GHMA September 2015-Sept 2016.

R4 FS Lands:	Decisions in PHMA	Number (%) with mitigations	Decisions in GHMA	Number (%) with mitigations	Decisions in IHMA	Number (%) with mitigations	Number of Decisions	Number (%) In Compliance
Ashley	1	0	0	0	NA	NA	1	1 (100%)
Beaverhead-Deerlodge	1	0	1	0	NA	NA	2	2 (100%)
Boise NF	0	0	0	0	0	0	0	NA
Bridger-Teton	3	0	3	0	NA	NA	6	6 (100%)
Caribou-Targhee	1	1 (100%)	1	1	3	3	5	5 (100%)
Dixie	0	0	0	0	NA	NA	0	0 (100%)
Fishlake	No Data	No Data	No Data	No Data	NA	NA	No Data	No Data
Humbolt-Toiyabe	1	1 /100%	0	0	NA	NA	1	1 (100%)
Manti-La Sal	1	1 (100%)	0	0	NA	NA	1	1 (100%)
Medicine-Bow Routt*	0	0	1	100	NA	NA	1	1(100%)
Salmon-Challis	4	2 (50%)	3	0	3	0	6	6 (100%)
Sawtooth	1	0	5	2	1	1	7	7 (100%)
UWC	3	1 (33%)	1	0	NA	NA	4	4 (100%)
Total	15	6	13	3	7	4	25	31 (100%)

*Includes Thunder Basin Grassland

Relevant Project Notes

Ashley

Flaming Gorge Bighorn Sheep Habitat Improvement Project: The project targets encroaching conifers, which would be beneficial to GRS habitat, especially within ~2 miles of active leks. However, conifer reduction treatment areas are in locations that would not be considered GRS habitat due to steep slopes and rocky/talus type terrain.

Boise

No decisions were made in sage-grouse habitats.

Bridger-Teton

Recreation Special Use Permit renewals 2016: PHMA; Outfitter-guides are authorized to only use existing permitted roads, trails, areas and assigned camps. Progressive and assigned camps comply with GYA Outfitter Policy.

Recreation Special Use Permit renewals 2015 : Outfitter-guides are authorized to only use existing permitted roads, trails, areas and assigned camps. Progressive and assigned camps comply with GYA Outfitter Policy. Forest food storage regulations apply.

Skyline Wildlife Urban Interface Fuels Reduction: PHMA; Sagebrush habitat was excluded from project treatment area

Caribou-Targhee

Birch Creek Conifer Removal: 2,252 acres in IHMA; Project decision included implementation timing stipulations to prevent disturbance to breeding/nesting sage-grouse when removing trees.

Idaho Powerline project; 19.7 acres PHMA 2.04 acres GHMA; Project included implementation timing stipulations and provisions for perch deterrents if monitoring indicates they are needed in the future.

Sweeten Invasive Tree Removal 245 acres of IHMA; Project included implementation timing stipulations to avoid disturbing breeding and nesting sage-grouse.

Curlew Fence Marking: 4,512 acres in IHMA; No stipulations were required.

Dixie

No decisions made in sage-grouse habitat.

Fishlake

No Report

Humbolt-Toiyabe

Cold Springs Watershed Restoration Project: PHMA; Stream channel and meadow restoration on approximately 33.68 acres in 2016. The project was implemented in the fall instead of nesting and rearing time. Had it been implemented in the spring daily noise limitations would have been observed.

Restoration included using native seed mix to seed in behind disturbances and minimized creating new edges in the brush. The project utilized material from a weed free rock source so as to prevent new weeds from occupying the habitat. To prevent new weed infestations vehicles were washed prior to allowing them to enter the site.

Manti-La Sal

Greens Hollow Coal Lease EIS; PHMA; The decision has been signed, but the activity not permitted. When the permit is sold, elements of the GRSB-M-CML-ST-092-Standard and GRSB-M-CML-GL-093-Guideline will be incorporated.

Medicine Bow Routt Thunder Basin

The Beaver Creek Wildfire was approximately 35,000 acres in size. They had a wildlife biologist on the fire team as a resource advisor, incorporated sage-grouse habitat maps into the WFDSS database and made them available to the incident command, considered the full spectrum of sage-grouse standards and guidelines into the suppression design, avoided key habitats when locating fire camps, and used existing roads as fire breaks to protect priority habitat,

Salmon-Challis

Lee Creek Allotment Invading Conifer Removal Project; PHMA; The Lee Creek Allotment Invading Conifer Removal is a five year project to help restore the suitability and functionality of sage-grouse spring breeding and summer late-brood rearing habitat in the Lee Creek Grazing Allotment of the Salmon-Challis National Forest. Mitigations: RDFs from the EIS were incorporated into this project including RDF 3, RDF 22, RDF 24, RDF 30, RDF 50, and RDF 88. At the time of signature the Forest was under the understanding that RDFs must be considered for each project in sage grouse habitat.

Sanders Culinary Water Pipeline Special Use Permit Renewal; IHMA: Reissue a special use permit for the continued operation and maintenance of an existing culinary water transmission system consisting of a head box and approximately 0.9 miles of 2-inch pipeline with a 20 foot right-of-way. No specific stipulations or mitigations were incorporated into the permit regarding sage grouse.

Copper Basin Airstrip Special Use Permit Renewal; PHMA: Reissue a special use permit for the continued operation and maintenance of an existing airstrip. The Copper Basin landing strip is approximately 4,700 ft. by 100 ft. or 11 acres of NFS land. Maintenance of this airstrip requires painting of markers as needed, annual mowing and rolling, and fencing surrounding it. No specific stipulations or mitigations were incorporated into the permit regarding sage grouse.

Issuing Permits for Expired Outfitter and Guide Authorizations; PHMA; GHMA; IHMA: Reauthorize expired special use permits for a ten year term to eleven land based outfitters on the Salmon-Challis National Forest. No specific stipulations or mitigations were incorporated into the permit regarding sage grouse.

Salmon-Challis National Forest Invasive Plant Treatment; PHMA; GHMA; IHMA: Allows for the conduct of up to 20,000 acres of invasive plant treatment annually outside of aquatic treatments. Treatment methods include biological, herbicide, and manual and mechanical control. Project design features included: Within known or potential sage-grouse nesting/early brood-rearing habitat, any aerial herbicide application would occur after June 30.

Big Hill Insect and Disease; GHMA; Big Hill Insect and Disease Project authorizes mechanical or hand fuel treatments, commercial harvest, and prescribed burning to improve current forest resiliency to insect and disease disturbances, while promoting the retention and development of wildlife habitat and large trees including large legacy trees. The decision was modified to eliminate any project activities within GHMA habitat.

Sawtooth

Lynn Bench Juniper Encroachment CE; PHMA; No stipulations needed to juniper treatment to restore sage grouse habitat.

Pit Fence CE; IHMA; Moved fence outside of area that would affect sage –grouse.

Eight Mile CE Sufficiency Review; GHMA; Installed escape ramps and shutoff in livestock troughs.

Rock Creek Fuels and Vegetation Project; GHMA; Assessed prescribed fire impact if spread into shrubs.

Uinta Wasatch Cache

Vernon Management Area, 8,500 acres. Mechanically treat, with mastication, mature juniper in areas of less than 30 percent slope. This treatment would remove large juniper trees and no mitigation measures.

Closing unauthorized route in Monte Cristo area. No mitigation measures.

Juniper removal across 850 acres in the Pleasant Valley Springs area to benefit greater sage-grouse. Mitigation included seasonal restrictions to avoid nesting/brood rearing.

The Roughneck project is a timber harvest (stand clearcut with leave trees or a two-aged stand clearcut with reserves) project intended to harvest infested mountain pine beetle-killed lodgepole pine trees and reduce woody fuels and hazardous trees. The timber harvest project is not in sage-grouse habitat and includes harvest of mature lodgepole pine trees. No greater sage-grouse mitigation or stipulations were included.

Table 2. Habitat Monitoring and Effectiveness Monitoring (Items B and D)

Measure 1: Current (1a) and Potential (1b) Sagebrush Habitat, through time on FS Lands (1c) Availability and Capability of lands using Priority Conservation Area boundaries in ROD as they intersect with FS Lands. Data for EVT and BPS are from Landfire coverages.

FS Region	PAC (FS)	BPS	EVT2012	% of BPS	EVT2013	% of BPS	EVT2014	% of BPS
1	229,555	170,997	149,571	87	149,471	87	149,447	87
2	228,394	218,105	191,215	88	190,721	87	190,712	87
3	NA	NA	NA	NA	NA	NA	NA	NA
4	4,810,089	3,182,794	1,878,528	59	1,871,627	59	1,871,162	59
5	417,036	314,180	239,960	76	239,746	76	239,307	76
6	66,051	33,675	15,989	47	15,989	47	15,989	47
Total	5,751,125	3,919,751	2,475,263	63	2,467,554	63	2,466,617	63

Table 3 –Habitat Availability and Capability (Item B and D)

Forest-scale analysis using Landfire data. R4 forests augmented with local (VCMQ) data for greater precision

Forest Name	Forest Acres	EVT*(2012)	EVT(2013)	EVT(2014)	BPS **	VCMQ Data` 2016	All HMAs''	Seasonal Habitat~
Ashley	1,378,346	130,150	130,108	130,124	244,779	187,703	225,190	64,753
Beaverhead-Deerlodge	2,591,721	305,603	305,520	305,517	382,709	N/A	396,940	93,517
Boise	2,203,798	238,976	186,938	186,395	428,984	195,586	78,339	58,310
Bridger-Teton	3,418,586	340,486	340,398	340,348	480,840	417,326	328,478	84,299
Caribou-Targhee	2,898,454	561,597	560,536	560,417	700,301	486,243	162,193	107,056
Dixie	1,631,933	96,692	96,696	96,689	403,511	238,829	184,754	79,779
Fishlake	1,706,097	192,660	192,623	192,619	677,380	303,915	180,316	78,025
Humboldt-Toiyabe	6,251,647	1,651,683	1,647,557	1,647,193	3,602,417	1,750,410	2,408,935	1,188,903
Manti-La Sal	1,340,213	138,139	138,094	137,908	307,599	131,474	96,617	29,827
Medicine Bow-Routt	2,892,491	619,175	618,338	618,287	771,665	N/A	579,848	154,414
Salmon-Challis	4,353,985	793,724	789,896	789,990	1,033,471	663,720	408,797	318,445
Sawtooth	2,110,414	517,968	497,507	497,436	780,513	582,446	514,145	250,800
Uinta-Wasatch-Cache	2,156,644	313,925	312,760	312,400	490,175	213,503	201,564	55,608

*EVT Landfire Existing Vegetation Type

** BPS BioPhysical Setting Historical Vegetation Landfire

`VCMQ Vegetation Classification Mapping and Quantitative Inventory

``Habitat Management Area (Filtered by the Record of Decision HMA for Greater Sage Grouse)

~Preliminary Seasonal Habitat refined area using the VCMQ (Filtered by the Record of Decision Habitat Management Areas)

Table 4. Habitat Degradation 2015: Broad scale estimates of the amount and percent per unit area (Item B, Item D); Supplied by BLM Anthropogenic Disturbances Database

Summary Unit		PHMA and IHMA Only (BSU)		
		Summary Unit Acres	Acres of Disturbance	% Disturbance
Range-Wide	Greater Sage-Grouse Current Range	63,745,929	445,774	0.70%
Management Zones	MZ I - Great Plains	12,240,632	80,690	0.66%
	MZ II - Wyoming Basins	16,335,606	142,715	0.87%
	MZ III - Southern Great Basin	6,981,191	56,196	0.80%
	MZ IV - Snake River Plain	21,621,272	124,766	0.58%
	MZ V - Northern Great Basin	6,600,833	39,653	0.60%
	MZ VI - Columbia Basin*	15,992,753	326,967	2.04%
	MZ VII - Colorado Plateau	233,248	4,036	1.73%
Populations	Anthro Mountain	1,399	0	0.00%
	Baker	336,540	5,069	1.51%
	Bald Hills	326,404	3,208	0.98%
	Belt Mountains*	3,120,915	29,754	0.95%
	Carbon	207,779	5,257	2.53%
	Central	802,741	9,197	1.15%
	Crab Creek*	808,111	9,428	1.17%
	Dakotas	1,444,234	14,896	1.03%
	E Tavaputs Plateau UT*	448,424	2,355	0.53%
	Eagle/S Routt CO	101,260	1,985	1.96%
	E-Central ID	3,539	6	0.18%
	Jackson Hole WY	44,829	333	0.74%
	Klamath OR/CA	19,036	275	1.44%
	Laramie WY*	296,944	3,261	1.10%
	Meeke - White River	13,034	148	1.14%
	Middle Park CO	207,982	3,557	1.71%
	Moses Coulee*	1,212,278	22,720	1.87%
	N Mono Lake CA/NV*	1,365,216	9,502	0.70%
	North Park	384,365	6,857	1.78%
	Northern Great Basin	14,139,816	75,806	0.54%
	Northern Montana	2,369,719	14,760	0.62%
	NW-Interior NV	240,774	943	0.39%
	Panguitch	344,073	4,040	1.17%
	Parachute Piceance Roan	220,214	3,888	1.77%
Parker Mountain-Emery	817,287	6,940	0.85%	
Pine Nut NV*	258,992	3,244	1.25%	
Powder River Basin	3,201,853	28,101	0.88%	

Summary Unit		PHMA and IHMA Only (BSU)		
		Summary Unit Acres	Acres of Disturbance	% Disturbance
Summary Unit	Quinn Canyon Range NV*	1,709,353	5,735	0.34%
	S Mono Lake CA*	589,467	13,781	2.34%
	S White River UT*	176,723	4,715	2.67%
	Sawtooth ID*	275,323	1,438	0.52%
	Sheeprock Mountains	526,348	4,915	0.93%
	Snake, Salmon, and Beaverhead	5,784,521	35,769	0.62%
	Southern Great Basin	4,286,617	27,655	0.65%
	Southwest Montana	1,356,856	8,116	0.60%
	Strawberry	160,630	2,628	1.64%
	Warm Springs Valley NV	58,288	314	0.54%
	Weiser ID*	944,539	9,602	1.02%
	West Tavaputs	50,397	403	0.80%
	Western Great Basin	5,720,768	29,867	0.52%
	White Mountains NV/CA*	1,278,708	12,108	0.95%
	Wyoming Basin	15,573,786	129,798	0.83%
	Yakama Indian Nation*	317,400	3,295	1.04%
	Yakima Training Center*	524,824	12,218	2.33%
	Yellowstone Watershed	5,225,039	22,934	0.44%
	Forests	Ashley National Forest	114,477	1,007
Boise National Forest		71,846	440	0.61%
Bridger-Teton National Forest		104,361	767	0.74%
Caribou-Targhee National Forest		151,620	1,402	0.92%
Dixie National Forest		193,077	1,048	0.54%
Fishlake National Forest		176,952	1,106	0.62%
Humboldt-Toiyabe National Forest		1,054,332	6,951	0.66%
Manti-La Sal National Forest		97,555	773	0.79%
Salmon-Challis National Forest		401,331	1,287	0.32%
Sawtooth National Forest		314,001	2,800	0.89%
Uinta-Wasatch-Cache National Forest		311,781	2,712	0.87%
TOTAL FS REGION 4 CONTRIBUTION TO RANGE-WIDE DISTURBANCE			20,293	0.03%

* Summary Units without PHMA or IHMA designations within them. The entire unit is represented in the PHMA & IHMA Only section of the table.

Table 5. Habitat Degradation 2015: Broad scale estimates of activities per Unit Area (Item B, Item D)
Supplied by BLM Anthropogenic Disturbances Database

Summary Unit		PHMA and IHMA Only (BSU)				
		Summary Unit Acres	Point Count	Poly Count	Total Count	Density (#/640 Acres)
Range-Wide	Greater Sage-Grouse Current Range	63,745,929	10,082	41	10,123	0.10
Management Zones	MZ I - Great Plains	12,240,632	0	4,400	4,400	0.23
	MZ II - Wyoming Basins	16,335,606	5	3,701	3,706	0.15
	MZ III - Southern Great Basin	6,981,191	14	221	235	0.02
	MZ IV - Snake River Plain	21,621,272	22	31	53	0.00
	MZ V - Northern Great Basin	6,600,833	0	4	4	0.00
	MZ VI - Columbia Basin *	15,992,753	2,648	0	2,648	0.11
	MZ VII - Colorado Plateau	233,248	0	1,725	1,725	4.73
Populations	Anthro Mountain	1,399	0	0	0	0.00
	Baker	336,540	0	0	0	0.00
	Bald Hills	326,404	0	0	0	0.00
	Belt Mountains*	3,120,915	16	0	16	0.00
	Carbon	207,779	153	3	156	0.48
	Central	802,741	2	0	2	0.00
	Crab Creek*	808,111	0	0	0	0.00
	Dakotas	1,444,234	1,081	0	1,081	0.48
	E Tavaputs Plateau UT*	448,424	203	0	203	0.29
	Eagle/S Routt CO	101,260	1	0	1	0.01
	E-Central ID	3,539	0	0	0	0.00
	Jackson Hole WY	44,829	0	0	0	0.00
	Klamath OR/CA	19,036	0	0	0	0.00
	Laramie WY*	296,944	0	0	0	0.00
	Meeker - White River	13,034	0	0	0	0.00

Summary Unit	PHMA and IHMA Only (BSU)				
	Summary Unit Acres	Point Count	Poly Count	Total Count	Density (#/640 Acres)
Middle Park CO	207,982	2	0	2	0.01
Moses Coulee*	1,212,278	0	0	0	0.00
N Mono Lake CA/NV*	1,365,216	6	5	11	0.01
North Park	384,365	310	0	310	0.52
Northern Great Basin	14,139,816	30	22	52	0.00
Northern Montana	2,369,719	18	0	18	0.00
NW-Interior NV	240,774	0	2	2	0.01
Panguitch	344,073	0	1	1	0.00
Parachute Piceance Roan	220,214	1,725	0	1,725	5.01
Parker Mountain-Emery	817,287	2	0	2	0.00
Pine Nut NV*	258,992	1	0	1	0.00
Powder River Basin	3,201,853	2,570	0	2,570	0.51
Quinn Canyon Range NV*	1,709,353	68	0	68	0.03
S Mono Lake CA*	589,467	58	1	59	0.06
S White River UT*	176,723	874	0	874	3.17
Sawtooth ID*	275,323	0	0	0	0.00
Sheeprock Mountains	526,348	0	0	0	0.00
Snake, Salmon, and Beaverhead	5,784,521	1	0	1	0.00
Southern Great Basin	4,286,617	59	8	67	0.01
Southwest Montana	1,356,856	0	0	0	0.00
Strawberry	160,630	2	0	2	0.01
Warm Springs Valley NV	58,288	0	0	0	0.00
Weiser ID*	944,539	1	0	1	0.00
West Tavaputs	50,397	5	0	5	0.06
Western Great Basin	5,720,768	2	0	2	0.00
White Mountains NV/CA*	1,278,708	33	3	36	0.02
Wyoming Basin	15,573,786	3,388	5	3,393	0.14

Summary Unit		PHMA and IHMA Only (BSU)				
		Summary Unit Acres	Point Count	Poly Count	Total Count	Density (#/640 Acres)
	Yakama Indian Nation*	317,400	0	0	0	0.00
	Yakima Training Center*	524,824	0	0	0	0.00
	Yellowstone Watershed	5,225,039	731	0	731	0.09
Forests	Ashley National Forest	114,477	0	0	0	0.00
	Boise National Forest	71,846	0	0	0	0.00
	Bridger-Teton National Forest	104,361	5	0	5	0.03
	Caribou-Targhee National Forest	151,620	0	0	0	0.00
	Dixie National Forest	193,077	0	0	0	0.00
	Fishlake National Forest	176,952	2	0	2	0.01
	Humboldt-Toiyabe National Forest	1,054,332	0	15	15	0.01
	Manti-La Sal National Forest	97,555	3	0	3	0.02
	Salmon-Challis National Forest	401,331	0	0	0	0.00
	Sawtooth National Forest	314,001	0	0	0	0.00
	Uinta-Wasatch-Cache National Forest	311,781	0	0	0	0.00
	TOTAL FS REGION 4 CONTRIBUTION TO RANGEWIDE DISTURBANCE DENSITY					25

* Summary Units without PHMA or IHMA designations within them. The entire unit is represented in the PHMA & IHMA Only section of the table.

Table 6. Population Monitoring (Item C)

Data collected and reported by states. Contact states for additional information.

	GRSG Male Bird Counts on Leks		
	2014	2015	2016
Colorado [#]	TBD	TBD	2,245
Idaho [*]	335	275	256
Idaho ^{**}	11,897	13,089	15,844
Nevada ^{**}	8,869	11,907	12,661
Montana ^{**}	538	502	616
Utah ^{***}	4,449	5,332	5,183
Wyoming ^{**}	20,211	36,233	42,433

[#]Northwest Colorado and North Park males counted on leks

^{*}On FS lands Only

^{**}Total State Count

^{***}Sage-grouse Management Area Males

Table 7. Effectiveness Monitoring (Item D)

Estimated Broad Scale Habitat Monitoring Trend (EVT) through time (derived from Table 3)

Forest Name	EVT*(2012)	EVT(2013)	1-Year Trend	EVT(2014)	1-Year Trend
Ashley	130,150	130,108	-42	130,124	16
Boise	238,976	186,938	-52,038	186,395	-543
Beaverhead Deerlodge	305,603	305,520	-83	305,517	-3
Bridger-Teton	340,486	340,398	-88	340,348	-50
Caribou-Targhee	561,597	560,536	-1,061	560,417	-119
Dixie	96,692	96,696	4	96,689	-7
Fishlake	192,660	192,623	-37	192,619	-4
Humboldt-Toiyabe	1,651,683	1,647,557	-4,126	1,647,193	-364
Manti-La Sal	138,139	138,094	-45	137,908	-186
Medicine Bow-Routt	619,175	618,338	-837	618,287	-51
Salmon-Challis	793,724	789,896	-3,828	789,990	94
Sawtooth	517,968	497,507	-20,461	497,436	-71
Uinta-Wasatch-Cache	313,925	312,760	-1,165	312,400	-360
		Trend Totals	-83,807		-1,648

Appendices: Auxiliary Sage-Grouse Related Information

Appendix 1. Sage-Grouse Habitat Improvement (approximate acres and projects, pending revision)

Table A1-1: Fiscal Year 2015-2016 Habitat Improvements Benefiting Sage-Grouse on Forest System Lands

FOREST UNIT	ACTIVITY	PARTNER_NAME	FUNDING AMOUNT	ACRES	MILES
ASHLEY	Fence-Removal	Youth Conservation Corps, Incorporated	1040	563	0
ASHLEY	Fence-Removal	Youth Conservation Corps, Incorporated	127000	208	2
		SUBTOTAL	128040	771	2
BOISE	Wildlife Habitat Improved	Rocky Mountain Elk Foundation	1225	69	0
BOISE	Wildlife Habitat Improved	Idaho Department of Fish and Game	1313	69	0
BOISE	Native Plant Restoration	Rocky Mountain Elk Foundation	4028	88	0
BOISE	Native Plant Restoration	US Air Force	1600	88	0
BOISE	Native Plant Restoration	Girl Scouts of America	1000	88	0
BOISE	Wildlife Habitat Improved	Rocky Mountain Elk Foundation	12775	731	0
BOISE	Wildlife Habitat Improved	Idaho Department of Fish and Game	13687	731	0
		SUBTOTAL	35628	1864	0
BRIDGER-TETON	Trail4203 Connector Spur Decommission NE End	Jackson Hole Wildlife Foundation	650	0.37	0.07
BRIDGER-TETON	User-created spur road barrier and obliteration		6000	2875	0
BRIDGER-TETON	Road obliteration using a disc and revegetation		6000	4350	0
BRIDGER-TETON	Fish Cr Feed ground Rd 30400/30438 Connector Spur Decommissioning		844	0.34	0.03912
BRIDGER-TETON	040304-Fish Cr Feed ground Rd 30400/30438 Connector Spur Decommissioning (West)		844	0.31	0.02088
BRIDGER-TETON	Wildlife Friendly Fence Tags		1500	0	2.25

FOREST UNIT	ACTIVITY	PARTNER_NAME	FUNDING AMOUNT	ACRES	MILES
BRIDGER-TETON	Wetland Restoration		21100	1	0.27
BRIDGER-TETON	Fence Removal		1500	40.5	0.2
BRIDGER-TETON	Prescribed fire for RX and sage-grouse		25000	298	0
BRIDGER-TETON	Trail4203 Connector Spur Decommission		750	0.48	0.09
BRIDGER-TETON	Removal 1st of 2 reaches of fence	Jackson Hole Wildlife Foundation	1650	245	0
BRIDGER-TETON	Removal 2nd of 2 reaches of fence	Jackson Hole Wildlife Foundation	1650	335	0
BRIDGER-TETON	Wilderness Boundary Spur Decommission		600	47	0.06
BRIDGER-TETON	Clark's Draw Road Improvement		10000	41	0
BRIDGER-TETON	Mosquito Lake East Road Improvement		10000	32	0
BRIDGER-TETON	Union Pass Road Improvement		22000	170	0
BRIDGER-TETON	2015 BTNF Noxious Weed Treatment in Sage Grouse Habitat		41000	793	0
BRIDGER-TETON	2016 BTNF Noxious Weed Treatment in Sage Grouse Habitat		97150	1873	0
		SUBTOTAL	248,238	11,102	3
CARIBOU-TARGHEE	Wildlife Habitat Improved	Idaho Department of Fish and Game	750	253	0
CARIBOU-TARGHEE	Wildlife Habitat Improved	Boy Scouts of America	500	253	0
CARIBOU-TARGHEE	Spring Protection	Pheasants Forever, Incorporated	500	26	0
CARIBOU-TARGHEE	Spring Protection	Fish and Wildlife Service	6000	26	0
		SUBTOTAL	7750	558	1
DIXIE	Wildlife Habitat Improved	Utah Department of Natural Resources	83000	1663	0

FOREST UNIT	ACTIVITY	PARTNER_NAME	FUNDING AMOUNT	ACRES	MILES
DIXIE	Wildlife Habitat Improved	Utah Department of Natural Resources	1000	4513	0
		SUBTOTAL	84000	6176	0
HUMBOLDT-TOIYABE	Wildlife Habitat Improved	Rocky Mountain Elk Foundation	42806	692	0
HUMBOLDT-TOIYABE	Wildlife Habitat Improved	Great Basin Institute	2714	6516	1
HUMBOLDT-TOIYABE	Wildlife Habitat Improved	Nevada Department of Wildlife	25630	401	0
HUMBOLDT-TOIYABE	Thinning	Rocky Mountain Elk Foundation	20000	275	0
HUMBOLDT-TOIYABE	Wildlife Habitat Improved-Game	Nevada Department of Wildlife	5000	60	0
HUMBOLDT-TOIYABE	Wildlife Habitat Improved-Game	Great Basin Institute	2714	7001	1
		SUBTOTAL	98864	14945	2
MANTI-LA SAL	Thinning	Utah Partners for Conservation and Development	30300	1	0
		SUBTOTAL	30300	1	0
MEDICINE BOW-ROUTT	Invasive weed treatments	NA	12000	2000	0
MEDICINE BOW-ROUTT	Invasive weed treatments	NA	6000	150	0
		SUBTOTAL	18000	2150	0
		TOTALS	\$650,820	37,567	8

Appendix 2. Adaptive Management Annual Evaluations by state.

Colorado

1. Soft Triggers

Soft Triggers are evaluated as part of decisions, “soft triggers for restrictive management actions would include evaluation of the effectiveness of the minimization, mitigation, and location of permitted activities in the context of the PAC.”

--State reports indicated that values did not exceed trigger thresholds.

2. Disturbance Cap Triggers

In Northwest Colorado, the disturbance cap trigger would be defined as habitat loss and/or degradation measured as the 3 percent disturbance cap in PHMA calculated by biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ).

--Percent disturbance in the Colorado Plateau Management Zone is 1.73%, thus the area is far under the trigger threshold.

3. Hard Triggers

The population hard trigger for Northwest Colorado is 1,575 counted males, and for North Park is 670 counted males.

The habitat loss threshold is determined by 30 percent cumulative loss of PHMA, measured independently in Northwest Colorado and North Park. North Park - Approx. 1400 males on leks, total Population over 5,000. **Values did not exceed trigger thresholds.** Northwest CO - Approx. 4,200 males on leks, low trigger is 1,550 males. Total population wasn't reported but is high and increasing. **Values did not exceed trigger thresholds.**

Idaho

1. Population Triggers.

Idaho Department of Fish and Game made the determination that **Values did not exceed trigger thresholds.**

2 Habitat Triggers.

TBD

Montana

TBD

Nevada

TBD

Utah

The Interagency Team for Utah met on 20 December, 2016 and 13 January, 2017 to evaluate sage-grouse population data.

1. Population Triggers

The Hard and Soft Triggers were evaluated for 12 populations in Utah. Most of the populations were well below trigger thresholds, although data indicate that the Sheep Rocks population has surpassed the set trigger thresholds. Specifically, for the hard trigger of “Lambda of less than 1 in 8 years of a 10 year window, based on all leks within the PHMA,” the lambda values for the Sheep Rocks population were less than 1, 8 times in the last 10 years:

Year	Lambda
2007	0.73
2008	0.41
2009	0.80
2010	1.83
2011:	0.33
2012	1.46
2013	0.68
2014	0.96
2015	0.81
2016	0.86

2. Habitat Triggers

After initial analyses, it was determined that none of the areas of habitat in PHMA had approached habitat trigger points. **Values did not exceed trigger thresholds.**

Wyoming

TBD

Appendix 3 Fire Management in Sage-Grouse Habitats

Fire Management Review of Fire Management Guidance Direction:

Regional fire managers participated in an After Action Review (AAR) of the Fire Management Guidance develop to protect or enhance Greater Sage Grouse habitat. The AAR occurred on Tuesday, November 8 as a topic item associated with the Intermountain Regional Fire Management Team meeting held in Jackson WY.

- The overall consensus was that things went very well.
- Several Forest FMO's remarked that the guidelines largely described the actions we typically have already taken for fire suppression in sage grouse habitats but it's good to have it in writing now.
- Nothing that we did was new practice or new perspective.
- We are closely aligned with our partners on appropriate management to protect habitats and the direction supports that close alignment.
- While the sage grouse issue is a bigger issue for BLM due to the amount of habitat they manage we are frequently engaged in good conversations with them about protecting habitat.
- There was much more prepositioning of smokejumper assets in southern and central Utah to be responsive to needs in sage grouse habitat, and that's been a positive change.
- We had a comment that the FWS habitat map in WFDSS has errors on the Caribou Targhee where the maps do not align with forest plan maps.

Fire and Invasive Species Assessment (FS-FIAT)

The purpose of these assessments is designed to assess threats to greater sage-grouse and its habitat from Wildfire, Invasive Species, and Conifer Encroachment on each Forest in the Great Basin. The Intermountain Region was tasked to complete the assessment for each National Forest and Grassland within the Region in cooperation with Forest Staff.

FIAT Completion Status

FY15: Completed: Sawtooth NF

FY16: Completed: Salmon Challis NF, Humboldt-Toiyabe NF and Boise NF

Started and to be delivered in FY17: Caribou-Targhee NF, Ashley NF, Dixie NF and Uinta-Wasatch-Cache NF

FY 17: Planned: Fishlake NF, Manti-Lasal NF, Bridger-Teton NF in addition the Beaverhead-Deerlodge NF in R1 and Medicine Bow-Routt/Thunderbasin Grasslands in R2 are planned

GRSG Fuels Project NEPA Planning

Starting in 2016 the Intermountain Region initiated a program to increase fuels management projects within Sage-Grouse habitat. NEPA analysis is being conducted for projects that intersect with GRSG habitat and urban interface areas.

FY16: Completed: Sawtooth NF: Lynn Bench Project, Humboldt-Toiyabe NF Landscape Fuels assessment

Started and to be delivered in FY17: Caribou-Targhee: Sheep Creek

FY17: Planned: Ashley NF: Flaming Gorge/Vernal RD GRSG Habitat Improvements (8,000 ac treatments). Efforts begun for Salmon-Challis NF, Manti-Lasal NF, Fishlake NF, and Bridger-Teton NF GRSG treatments NEPA.

2016 Fire and Fuels Activities

Though the 2016 fire season was relatively slow across the country and in the Intermountain Region there was still a significant amount of both wildland fire and fuels management activities that occurred in GRSG habitat on national forest lands. Table A3-1 displays the total acres of GRSG habitat protected by each National Forest in the region, plus the number of fire and fuels projected along with the acres burned by wildfire and acres treated through fuels projects.

Table A3-1. Region 1, 2, and 4, National Forest Fire Information for Sage-Grouse Habitat.

R4 NFs	Acres Protected in GRSG Habitat*	# of Fires in GRSG habitat	Acres Burned in GRSG habitat
Ashley	242,600	5	31.5
Boise NF	131,500	0	0
Beaverhead-Deerlodge	410,900	1	24
Bridger-Teton	349,300	13	16.9
Caribou-Targhee	123,400	1	5
Dixie	246,100	6	1.65
Fishlake	133,400	0	0
Humboldt-Toiyabe	1,784,400	1	3
Manti-La Sal	109,600	5	543
MBRTB	593,233	4	2121
Salmon-Challis	439,400	2	0.2
Sawtooth	571,600	7	147
UWC	378,800	40	3,501
Total	5,514,233	85	6,394

*Amount of habitat estimated and reported in Record of Decisions