U.S. Department of the Interior
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# Greater Sage-Grouse Plan Implementation

## Rangewide Monitoring Report for 2015–2020

October 2021

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# Greater Sage-Grouse Plan Implementation

## Rangewide Monitoring Report for 2015–2020


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# Executive Summary



In 2015, the Bureau of Land Management (BLM) amended dozens of land use plans to improve management of Greater Sage-Grouse habitat on public lands. At the same time, the agency began implementation of a monitoring framework, as required by the land use plans, to assess Greater Sage-Grouse habitats across 11 western states. The BLM produces a summary report of the data collected via the monitoring framework every 5 years. This is the first such report.

The monitoring framework considers two primary scales: the rangewide scale and the land use plan scale. At the rangewide scale, the BLM assembles data on 1) Greater Sage-Grouse habitat availability, condition, and degradation, 2) intensity of development in Priority and Important Habitat Management Areas, and 3) Greater Sage-Grouse population size. At the land use plan scale, the BLM assembles data on 1) the implementation of the land use plans' habitat and disturbance objectives, 2) measures of land health standards, and 3) the trend of Greater Sage-Grouse populations in the planning area.

In producing this report, the BLM followed the protocols from the monitoring framework. The report responds to specific questions and uses methods and datasets identified within the framework. While there are additional management actions that influence Greater Sage-Grouse habitat, they are not included in the monitoring framework and are not included in this report. For example, this report does not consider or analyze the BLM's oil and gas lease sales in Greater Sage-Grouse habitat because the monitoring framework focuses on actual development, not potential or expected development.

**With respect to habitat**, at the rangewide scale, this report focuses on Priority Habitat Management Areas and Important Habitat Management Areas, as defined by the BLM's land use plans, in the Rocky Mountain and Great Basin Regions. The analysis determines that sagebrush availability in all land ownership categories declined by approximately 3% (approximately 1.9 million acres total; 1.4 million acres in the Great Basin Region and 529,000 acres in the Rocky Mountain Region) between 2012 and 2018. Wildfire accounted for approximately 72% of the sagebrush loss in both regions and represents the largest driver of sagebrush loss in the Great Basin Region (87% of the loss in the Great Basin was from wildfire). The causes of sagebrush loss in the Rocky Mountain Region were more evenly distributed among wildfire (34%), conversion to impervious surfaces (27%), and conversion to agriculture (38%). This sagebrush loss occurred primarily on BLM-managed lands (approximately 1.1 million acres total; 951,000 acres in the Great Basin Region and 135,000 acres in the Rocky Mountain Region).

Rangewide, for areas not lost to wildfire and other causes, beneficial habitat characteristics (e.g., sagebrush cover, height and shape, and perennial grass and forb cover and height) remained relatively constant or displayed modest increases between 2013 and 2018, while nonbeneficial habitat attributes (e.g., nonnative/invasive species and annual grasses) displayed an increase in presence and abundance.

At the land use plan scale, this report shows that vegetative conditions are mixed, in some cases meeting and in other cases not meeting, each habitat objective. However, even when an area does not meet each habitat objective, it does not necessarily mean that the seasonal habitat is unsuitable for Greater Sage-Grouse. For example, vegetation may meet only a portion of the habitat objectives, but the area could be suitable for Greater Sage-Grouse. The BLM did not, for this report, determine habitat suitability per the methodology in the Sage-Grouse Habitat Assessment Framework (Stiver et al. 2015). Such determinations warrant further interpretation of these data and consider several additional factors at multiple scales.

This report also considers habitat conditions through adaptive management triggers and land health evaluations. We found that 16 habitat triggers have been tripped, indicating that habitat losses have exceeded thresholds set

in the respective land use plan (e.g., a trigger was tripped in Utah when more than 10% of habitat was lost in a Priority Habitat Management Area). Of those livestock grazing allotments containing Greater Sage-Grouse habitat where the BLM conducted land health evaluations between 2015 and 2019, approximately 3 million acres have achieved, or are making progress towards achieving, BLM land health standards. The BLM changed livestock grazing management on approximately 620,000 additional acres to help to achieve these standards.

**In terms of disturbance**, the rangewide analysis also found that, in Priority Habitat Management Areas and Important Habitat Management Areas, anthropogenic disturbance (which, for the purposes of this report, includes energy development, mining, and other infrastructure) increased by approximately 0.03% rangewide (approximately 17,000 acres; 5,000 acres in the Great Basin Region and 12,000 acres in the Rocky Mountain Region) between 2015 and 2020. However, due to some data limitations, this rangewide dataset may be underestimating anthropogenic disturbance as discussed in this report.

The land use plan scale analyses also summarize anthropogenic disturbance but use land use authorizations as the primary metric rather than the datasets identified in the monitoring framework for the rangewide analysis. We found that there were 604 authorizations covering approximately 73,000 acres spread across a variety of types of land use authorizations (e.g., oil and gas, rights-of-way, etc.) in Priority Habitat Management Areas and Important Habitat Management Areas. For example, in Colorado, the BLM had over 34,000 acres of surface-disturbing authorizations within priority habitat since 2015, the most of any BLM state, followed by Nevada (approximately 22,000 acres) and Wyoming (approximately 13,000 acres). These authorized disturbances may not yet be developed and thus may not be reflected in the source data for rangewide disturbance estimates or may be co-located with existing disturbances, which contributes to the discrepancy between the rangewide disturbance estimate and the authorized disturbance total.

**In terms of population trends**, the BLM works with or relies upon state governments to provide population estimates and trends, which are summarized in each state monitoring report (appendices 7–15). We found that Greater Sage-Grouse populations are declining in some areas of their range more markedly than in others. For adaptive management purposes, the BLM includes soft and hard population triggers in land use plans. Altogether, 42 population triggers have been tripped, indicating that population declines have exceeded thresholds set in the respective land use plan's adaptive management appendix. These findings align with population trends in the U.S. Geological Survey's rangewide population monitoring report (Coates et al. 2021).

The results presented in this report, in combination with the U.S. Geological Survey's rangewide population monitoring report (Coates et al. 2021) and sagebrush conservation strategy (Remington et al. 2021), emphasize the urgent need to expand ongoing efforts to conserve currently functional habitat and restore currently degraded habitat. Expanding these efforts aligns with Executive Order 14008, which calls for the conservation and restoration of public lands and waters.

# Introduction



In 2015, the Bureau of Land Management (BLM) completed a National Environmental Policy Act review and the process to revise or amend its resource management plans to identify and incorporate measures to conserve, enhance, and restore Greater Sage-Grouse habitat by reducing, eliminating, or minimizing threats to that habitat.[1] The BLM conducted the 2015 environmental review and planning process in response to the U.S. Fish and Wildlife Service's March 2010 finding that protection of Greater Sage-Grouse under the Endangered Species Act was "warranted, but precluded." The finding identified the inadequacy of regulatory mechanisms as a significant threat to the species. The BLM's principal regulatory mechanisms are the conservation measures identified in its land use plans. To monitor the implementation of the 2015 land use plans, the BLM cooperated with the U.S. Forest Service (USFS) to develop "The Greater Sage-Grouse Monitoring Framework" (monitoring framework) (BLM and USFS 2015), which was incorporated as an appendix in the approved resource management plans.

The monitoring framework outlines a process to monitor the sage-grouse objectives of the BLM's 2015 national planning strategy and land use plans annually and produce a report every 5 years beginning in 2020. It identifies rangewide datasets and methods for the BLM and USFS to use for implementation, habitat, population, and effectiveness monitoring; however, the agencies used some additional and updated datasets as described in the methods section of this rangewide monitoring report. The datasets and methods used for state-level monitoring of the 2015 land use plans are described in each of the BLM state monitoring reports, which are included in this rangewide report. The rangewide and state monitoring reports serve to complete our commitment in the monitoring framework to produce a 5-year monitoring report.

The structure for the BLM rangewide monitoring report and each of the nine state-specific reports is based on a set of questions from the monitoring framework. The questions are intended to help evaluate the effectiveness of the BLM's national planning strategy and the conservation measures contained in the individual 2015 BLM land use plans.

This rangewide monitoring report summarizes implementation data and information to answer the following questions:

1. Sagebrush Availability and Condition:

    a. What is the amount of sagebrush availability and the change in the amount and condition of sagebrush?
    b. What is the existing amount of sagebrush on the landscape and the change in the amount relative to the pre-Euro-American historical distribution of sagebrush (biophysical setting (BpS))?
    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?

[1] The BLM subsequently amended its land use plans to address sage-grouse habitat conservation in 2019, but those amendments are not currently being implemented as a result of a preliminary injunction. Therefore, this report focuses on monitoring the implementation of its 2015 planning decisions.

3. What is the population estimation of sage-grouse and the change in the population estimation?

4. How are the BLM and USFS contributing to changes in the amount of sagebrush?

5. How are the BLM and USFS contributing to disturbance?

The BLM uses Priority Habitat Management Areas (PHMAs) and Important Habitat Management Areas (IHMAs) within biologically significant units (BSUs) for plan implementation, data analysis, and reporting unless otherwise noted. The BLM defines PHMAs as lands identified as having the highest habitat value for maintaining sustainable Greater Sage-Grouse populations (**Rocky Mountain Record of Decision (ROD)**, **Great Basin ROD**, 2015). IHMAs are specific to Idaho, and the BLM defines them as areas of generally moderate to high value habitat or populations but that are not as important as PHMAs (**Great Basin ROD**, **IDSWMT RMP**, 2015). The BLM defines BSUs as geographic units of PHMAs/IHMAs that contain relevant and important Greater Sage-Grouse habitat and uses them as the spatial extent for adaptive management trigger analyses as described in each land use plan and both regional RODs (**Rocky Mountain ROD**, **Great Basin ROD**, 2015).

The BLM state monitoring reports (appendices 7–15) summarize data and information to answer the following questions:

1. Is this plan meeting the sage-grouse habitat objectives?

2. Are sage-grouse areas within the land use plan [area] meeting, or making progress towards meeting, land health standards, including the Special Status Species/wildlife habitat standard?

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse areas increasing, stable, or declining?

The BLM's summary and analysis of applicable data to address the questions in the monitoring framework does not draw a line from cause to effect as the questions might imply because that is beyond the scope of this monitoring report. In some cases, insufficient time has passed since the completion of the land use plans to allow for a causal analysis to evaluate effectiveness of the strategy and the conservation measures in the plans. We analyzed the datasets identified in the monitoring framework, provided those results, and drew a conclusion that summarizes the data and information presented relative to the monitoring question.

# Methods



To maintain consistency with these large-scale evaluations as detailed in its land use plans, the BLM chose the BSU as the summary unit for the sagebrush availability and disturbance monitoring calculations. The BLM makes these calculations annually within 105 BSUs. This rangewide monitoring report presents these data aggregated to the scale of all BSUs rangewide and regionally. The regions used to aggregate BSU-scale estimates are informed by the Western Association of Fish and Wildlife Agencies' (WAFWA's) management zone delineations, the regional records of decision (2015), and BLM administrative boundaries and are those currently leveraged in the BLM's funding prioritization process. BSUs within the Rocky Mountain Region include those in Colorado, Wyoming, Montana, North and South Dakota, and two in Utah (Rich County and Uinta–Diamond Mountain). The remainder of Utah's BSUs, plus those in Idaho, Nevada, California, and Oregon, comprise the Great Basin Region.

## Question 1a. What is the amount of sagebrush availability and the change in the amount and condition of sagebrush availability?

We used the number of acres of sagebrush vegetation communities on the landscape to describe the overall availability of sagebrush in sage-grouse habitats. We addressed the description of sagebrush condition in question 1c. The BLM has developed and maintained a LANDFIRE derived sagebrush dataset—existing vegetation type (EVT, version 1.2)—representing the estimated distribution of sagebrush in 2012 to inform this metric. As described in the monitoring framework (pp. 10–21), this dataset has been updated annually to remove sagebrush lost to wildfire and to agricultural conversion, with a single impervious surface removal in the 2017 dataset reflecting a cumulative (since 2012) loss to development. Data representing large fires (see the **Monitoring Trends in Burn Severity website**) is not immediately available, so updates to this dataset lag 1.5–2 years behind the current year (hence the 2012 through 2018 timeframe). Further, the most recent version of the impervious surface dataset released by the National Land Cover Database represents a new inventory and classification of all impervious surfaces (roads, core urban areas, and energy production sites; see **the NLCD website**), including areas previously classified as impervious. These existing areas, already removed during the creation of the 2012 baseline EVT dataset, may be captured differently in this data release and inflate the loss of sagebrush since 2012 to development that was already existing on the landscape.

These calculations represent *estimates* of sagebrush availability across all lands (regardless of ownership) and track loss of sagebrush only. The BLM has not yet implemented the addition of sagebrush to this dataset to represent successful sagebrush restoration activities, as described in the monitoring framework (p. 20). The BLM has submitted treatment and other restoration data to the U.S. Fish and Wildlife Service's Conservation Efforts Database (**conservationefforts.org**). The BLM may update our analyses to account for sagebrush restoration in future monitoring reports.

We executed the calculations using the **Tabulate Area** function in ArcGIS against the annually updated EVT dataset, with PHMAs/IHMAs within each BSU as the summary unit. We present results as acres and percent of PHMAs/IHMAs that is EVT for each year analyzed.

An example of the calculation is:

> Percent PHMAs/IHMAs within BSU that is EVT = [Acres EVT in PHMAs/IHMAs within BSU] / [Acres of PHMAs/IHMAs within BSU] * 100

The following are additional analysis details and data sources for all sagebrush availability calculations:

**EVT data**

- EVT, 2012: LANDFIRE version 1.2, derived April 2014 and updated December 2014 following the procedures outlined in the monitoring framework (pp. 11–20).
- EVT, 2013 through 2018, following the procedures outlined in the monitoring framework (pp. 19–20).

**Sagebrush loss data**

- Monitoring Trends in Burn Severity fire data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.
- GeoMAC fire perimeters data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.
- U.S. Department of Agriculture cropland data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.

- National Land Cover Database impervious surface data. Accessed October 2019 (applied to the 2017 EVT update only).

**Summary unit data and acquisition date**

- BSUs: Provided by each plan/environmental impact statement between May 2015 and October 2017.
- PHMAs and IHMAs: Provided by each plan/environmental impact statement between February 2016 and February 2020.

**Datum, coordinate system, and projection**

- Geographic Coordinate System: GCS_North_American_1983
- Datum: D_North_American_1983
- Projected Coordinate System: NAD_1983_Albers
- Projection: Albers

## Question 1b. What is the existing amount of sagebrush on the landscape and the change in the amount relative to the pre-Euro-American historical distribution of sagebrush (BpS)?

In addition to the sagebrush availability dataset (EVT) described in question 1a, the BLM used the LANDFIRE biophysical settings (BpS) dataset to identify ecological systems capable of supporting sagebrush vegetation communities as described in the monitoring framework (pp. 10–21). We used this static dataset to further refine the sagebrush availability calculation described in question 1a by providing an estimate of the potential for sagebrush communities to occur across large landscapes. All areas classified as sagebrush in the EVT dataset occur in areas identified as having the potential to support sagebrush in the BpS dataset. Thus, we used the BpS dataset as a denominator to describe sagebrush availability in relation to the potential for sagebrush communities in PHMAs/IHMAs by BSU.

We executed these calculations using the **Tabulate Area** function in ArcGIS against the static BpS dataset, with PHMAs/IHMAs within each BSU as the summary unit. We present results as the percent of BpS that is EVT in PHMAs/IHMAs by BSU for each year analyzed.

An example of the calculation is:

Percent of BpS that is EVT in PHMAs/IHMAs within BSU = [Acres EVT in PHMAs/IHMAs within BSU] / [Acres BpS in PHMAs/IHMAs within BSU] * 100

The following are additional analysis details and data sources:

**Summary unit data and acquisition date**

- BSUs: Provided by each plan/environmental impact statement between May 2015 and October 2017.
- PHMAs and IHMAs: Provided by each plan/environmental impact statement between February 2016 and February 2020.

**Datum, coordinate system, and projection**

- Geographic Coordinate System: GCS_North_American_1983
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## Question 1c. What is the trend and condition of the indicators describing sagebrush characteristics important to sage-grouse?

We described the trend and condition of 11 indicators important to sage-grouse using data from the BLM Landscape Monitoring Framework. The Landscape Monitoring Framework reports on the condition and trend of rangeland resources on BLM public lands in the 13 western states. The Landscape Monitoring Framework consists of a yearly survey of approximately 2,000 random locations spread across BLM-managed lands. Within each 0.16 ha circular location (or plot), data collectors gather information on the BLM terrestrial core indicators (MacKinnon et al. 2011) and the attributes of rangeland health (Pellant et al. 2005). The specific methodologies included: line-point intercept supplemented by plant species inventory, gaps between plant canopies, vegetation height, stability of soil aggregates (all from Herrick et al. 2017), and the Interpreting Indicators of Rangeland Health protocol (Pellant et al. 2005). Data provided by this suite of methods allow for the calculation of myriad attributes and indicators of rangeland resource condition. For this effort, however, the team reported on a limited suite of indicators related to Greater Sage-Grouse habitat and did not produce an exhaustive set of estimates from all methods. For a more in-depth description of the Landscape Monitoring Framework, also known as the Rangeland Resource Assessment, see Karl et al. (2016).

We used the Landscape Monitoring Framework data to generate summaries of 11 indicators that are generally recognized as important components of Greater Sage-Grouse habitat condition (e.g., sagebrush cover) or potential threats to habitat condition (e.g., invasive species). These indicators provide consistent contextual information about habitat conditions broadly across the range:

- Percent cover of sagebrush on BLM rangelands
- Mean sagebrush species height in inches on BLM rangelands
- Proportion of sagebrush that is columnar shaped on BLM rangelands
- Proportion of sagebrush that is spreading shaped on BLM rangelands
- Percent cover of perennial grasses and perennial forbs on BLM rangelands
- Mean herbaceous plant species height in inches on BLM rangelands
- Percent cover of bare ground on BLM rangelands
- Proportion of BLM rangelands with nonnative invasive species present
- Proportion of BLM rangelands where ≥25% of foliar cover is comprised of nonnative invasive species
- Proportion of vegetation composed of annual grasses on BLM rangelands
- Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands

We summarize the indicators for two reporting areas. Type I areas are those within BLM-managed Greater Sage-Grouse habitat. BLM and Natural Resources Conservation Service experts identified type I habitat areas by combining information on the spatial distribution of Greater Sage-Grouse breeding densities (Doherty et al. 2010) with the Natural Resources Conservation Service's Common Resource Areas that represented targeted areas likely to be Greater Sage-Grouse habitat. Type II areas are BLM-managed rangelands outside of identified type I lands in the lower 48 contiguous states. The summaries are weighted estimates representing the area sampled (type I and type II BLM-managed lands) for each indicator. This differentiation between type I

and type II BLM-managed lands was implemented in the 2013 monitoring season, reflecting the beginning year of these estimates. Analyses of data collected in 2018 were completed and included in this report; however, these efforts are ongoing and will continue to be available for future years. The summaries also include 80% confidence intervals, meaning that if the sampling and measurements of BLM rangelands were repeated many times, 80% of the time the true value of the indicator would lie within the interval. Instances where confidence intervals do not overlap are the basis for comparisons between areas and statements about change over time in this report. We did not perform a formal difference or trend analysis.

## Question 2a. What is the amount of habitat degradation and the change in that amount?

The BLM has identified a suite of spatial datasets representing degradation threats to sage-grouse habitats across the range. These source datasets are processed and combined in a desktop GIS annually according to the methods and decisions documented in the monitoring framework (pp. 22–29). We used the resulting disturbance compilation to generate *estimates* of anthropogenic disturbance footprints in PHMAs/IHMAs within a BSU.

An example of the calculation is:

> Percent of PHMAs/IHMAs disturbed within BSU = [Acres of compiled disturbance in PHMAs/IHMAs within BSU] / [Acres PHMAs/IHMAs within BSU] * 100

The following are additional analysis details and data sources:

**Disturbance estimate data**

- Energy (Oil and Gas) Wells: IHS Inc, Automated Fluid Minerals Support System extracts. Accessed August–November 2015, September–October 2016, September 2017, September–October 2018, August–October 2019, and September 2020.
- Energy (Oil and Gas) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Coal) Mines: BLM, USFS, Office of Surface Mining Reclamation and Enforcement, U.S. Geological Survey (USGS) Mineral Resources Data System. Accessed August–September 2015, August 2016, November 2017, September 2018, August 2019, and September 2020.
- Energy (Coal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Wind) Wind Turbines: Federal Aviation Administration. Accessed September 2015, August 2016, September 2017, August 2018, September 2019, and September 2020.
- Energy (Wind) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Solar) Fields/Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Geothermal) Wells: IHS. Accessed September 2015, September 2016, September 2017, August 2018, August 2019, and September 2020.
- Energy (Geothermal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Mining Locatable Developments: InfoMine Active Producers. Accessed September 2015, August 2016, October 2017, and September 2018. Footprints updated October 2019 and September 2020.

- Infrastructure (Roads) Surface Streets (Minor Roads): Esri StreetMap Premium. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Roads) Major Roads: Esri StreetMap Premium. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Roads) Interstate Highways: Esri StreetMap. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Railroads): Federal Railroad Administration. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 1–199 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 200–399 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 400–699 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 700+ kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Communication Towers): Federal Communications Commission. Accessed August 2015, September 2016, September 2017, August 2018, August 2019, and August 2020.
- Infrastructure (Other Vertical Structures): Federal Aviation Administration. Accessed September 2015, August 2016, September 2017, August 2018, September 2019, and October 2020.

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**Datum, coordinate system, and projection**

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## Question 2b. What is the intensity of activities and the change in the intensity?

A subset of the degradation threats, described in question 2a and the monitoring framework, are used to estimate the density of energy and mining activities in sage-grouse habitats. The data themes included in this analysis are oil and gas wells and development facilities; coal mines; wind towers; solar fields; geothermal wells and development facilities; and active locatable, leasable, and salable developments. The source datasets are processed and combined in a desktop GIS and updated annually according to the methods and decisions documented in the monitoring framework (pp. 26–29). We report densities as the number of energy and mining facilities per 640 acres of PHMAs/IHMAs in a BSU.

An example of the calculation is:

> Density of energy and mining in PHMAs/IHMAs by BSU = [Count of energy and mining features in PHMAs/IHMAs] / Area of PHMAs/IHMAs (acres) * 640

The following are additional analysis details and data sources:

**Density estimate data**

- Energy (Oil and Gas) Wells: IHS, Automated Fluid Minerals Support System extracts. Accessed August–November 2015, September–October 2016, September 2017, September–October 2018, August–October 2019, and September 2020.
- Energy (Oil and Gas) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Coal) Mines: BLM, USFS, Office of Surface Mining Reclamation and Enforcement, USGS Mineral Resources Data System. Accessed August–September 2015, August 2016, November 2017, September 2018, August 2019, and September 2020.
- Energy (Coal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Wind) Wind Turbines: FAA. Accessed September 2015, August 2016, September 2017, August 2018, September 2019, and September 2020.
- Energy (Wind) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Solar) Fields/Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Geothermal) Wells: IHS extract. Accessed September 2015, September 2016, September 2017, August 2018, August 2019, and September 2020.
- Energy (Geothermal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Mining Locatable Developments: InfoMine Active Producers. Accessed September 2015, August 2016, October 2017, and September 2018. Footprints updated October 2019 and September 2020.

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## Question 2c. What is the amount of reclaimed energy-related degradation and the change in the amount?

We used two methods to estimate reclamation on plugged and abandoned oil and gas wells in PHMAs and IHMAs. In both methods, operators submit a Final Abandonment Notice ("Sundry Notices and Reports on Wells," form 3160-5) when they complete reclamation efforts at their sites disturbed by oil and gas activities. The BLM approves the Final Abandonment Notice if the reclamation meets the standards and enters a disposition date into the Automated Fluid Minerals Support System. The BLM produced a report of all approved Final Abandonment Notices from September 18, 2015, to June 4, 2020, from the BLM's Automated Fluid Minerals Support System database. We then filtered the Final Abandonment Notice list to only include BLM field offices with sage-grouse habitat. Details of the two methods are as follows:

**Latitude/Longitude and Greater Sage-Grouse Overlay**

We gave the Final Abandonment Notice points with latitude/longitude a radius of 5 acres and then intersected them with PHMAs and IHMAs to estimate the amount of reclamation at each site. In Wyoming, we used an additional data layer to identify latitude/longitude of Final Abandonment Notices that did not have this information in the Automated Fluid Minerals Support System.

**Legal Land Descriptions and Greater Sage-Grouse Overlay**

The Final Abandonment Notices with only legal land descriptions were mapped to a quarterquarter section (40 acres), which is larger than the 5-acre estimate and is also not centered where the exact disturbance is located. We intersected the quarter-quarter section with PHMAs and IHMAs. Subsequently, we estimated each applicable Final Abandonment Notice to be 5 acres of reclamation.

The sum of the records from both techniques provided the final number and acreage of the reclaimed areas for this report.

No other energy and mining related reclamation activity is estimated or documented in this report.

## Question 3. What is the population estimation of sage-grouse and the change in the population estimation?

In 2014, the BLM, WAFWA, and state wildlife agencies within the sage-grouse range entered into a data sharing memorandum of understanding that identified a process, timelines, and responsibilities for the sharing of sage-grouse population and habitat data. Summaries of sage-grouse population data sharing and analysis between state wildlife agencies and BLM state offices can be found in the state monitoring reports (appendices 7–15) but not in the rangewide analysis portion of this report.

For the past several years, the state wildlife agencies, which are the authoritative sources for sage-grouse lek count data, have been cooperating with the USGS and universities to organize and standardize lek count data to produce a population estimate. With standardized lek data and incorporation of sampling errors and biases, our partners will improve upon previous efforts that produced a minimum population estimate. The methodology and trend estimates in sage-grouse populations are published in the USGS rangewide population monitoring report (Coates et al. 2021).

## Question 4. How are the BLM and USFS contributing to changes in the amount of sagebrush?

We identified and categorized areas of EVT lost due to fire, agriculture conversion, and impervious surfaces annually and cumulatively over the reporting period. We identified annual EVT loss by subtracting the current year EVT dataset, as described in question 1a, from the previous year EVT dataset using the **Minus** function in ArcGIS. We reclassified the datasets used to remove EVT due to fire, agricultural conversion, and impervious surfaces (in the 2017 update only) to a unique number and combined them in ArcGIS using the **Reclassify** and **Plus** functions, respectively. We used this dataset to identify areas of EVT loss with the cause of loss using the **Times** function in ArcGIS. We reported this process for each pair of annual EVT datasets. We then summarized these areas in ArcGIS using the **Tabulate Area** function and the BLM's surface management agency dataset to quantify acres lost by cause on surface managed by the BLM, the USFS, other federal agencies, and state, private, and other entities in PHMAs/IHMAs by BSU. We performed additional calculations on the output acreages, such as percent of total loss each year by surface management agency, using Excel.

**EVT data**

- EVT, 2012: LANDFIRE version 1.2, derived April 2014 and updated December 2014 following the procedures outlined in the monitoring framework (pp. 11–20).
- EVT, 2013 through 2018, following the procedures outlined in the monitoring framework (pp. 19–20).

**Sagebrush loss data**

- Monitoring Trends in Burn Severity fire data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.
- GeoMAC fire perimeters data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.
- U.S. Department of Agriculture cropland data. Accessed December 2014, December 2015, May 2016, May 2017, November 2018, October 2019, and October 2020.
- National Land Cover Database impervious surface data. Accessed October 2019 (applied to the 2017 EVT update only).

**Summary unit data and acquisition date**

- BSUs: Provided by each plan/environmental impact statement between May 2015 and October 2017.
- PHMAs and IHMAs: Provided by each plan/environmental impact statement between February 2016 and February 2020.
- Surface Management Agency: The BLM National Operations Center spatial data service accessed the national surface management agency compilation data on February 11, 2020.

**Datum, coordinate system, and projection**

- Geographic Coordinate System: GCS_North_American_1983
- Datum: D_North_American_1983
- Projected Coordinate System: NAD_1983_Albers
- Projection: Albers

## Question 5. How are the BLM and USFS contributing to disturbance?

We calculated changes in estimated disturbance area from one year to the next and cumulatively over the reporting period. We summarized these estimates in a desktop GIS by the BLM's surface management agency dataset to quantify acres of change on surface managed by the BLM, the USFS, other federal agencies, and state, private, and other entities in PHMAs/IHMAs by BSU. Changes in the annual disturbance estimates were calculated in Excel.

**Disturbance estimate data**

- Energy (Oil and Gas) Wells: IHS, Automated Fluid Minerals Support System extracts. Accessed August–November 2015, September–October 2016, September 2017, September–October 2018, August–October 2019, and September 2020.
- Energy (Oil and Gas) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Coal) Mines: BLM, USFS, Office of Surface Mining Reclamation and Enforcement, USGS Mineral Resources Data System. Accessed August–September 2015, August 2016, November 2017, September 2018, August 2019, and September 2020.
- Energy (Coal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Wind) Wind Turbines: Federal Aviation Administration. Accessed September 2015, August 2016, September 2017, August 2018, September 2019, and September 2020.
- Energy (Wind) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Solar) Fields/Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Energy (Geothermal) Wells: IHS. Accessed September 2015, September 2016, September 2017, August 2018, August 2019, and September 2020.
- Energy (Geothermal) Power Plants: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Mining Locatable Developments: InfoMine Active Producers. Accessed September 2015, August 2016, October 2017, and September 2018. Footprints updated October 2019 and September 2020.
- Infrastructure (Roads) Surface Streets (Minor Roads): Esri StreetMap Premium. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Roads) Major Roads: Esri StreetMap Premium. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Roads) Interstate Highways: Esri StreetMap. Accessed September 2015, September 2016, April 2017, June 2018, August 2019, and August 2020.
- Infrastructure (Railroads): Federal Railroad Administration. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 1–199 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 200–399 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 400–699 kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Power Lines), 700+ kV Lines: Platts. Accessed September 2015, September 2016, September 2017, August 2018, October 2019, and September 2020.
- Infrastructure (Communication Towers): Federal Communications Commission. Accessed August 2015, September 2016, September 2017, August 2018, August 2019, and August 2020.

- Infrastructure (Other Vertical Structures): Federal Aviation Administration. Accessed September 2015, August 2016, September 2017, August 2018, September 2019, and October 2020.

**Summary unit data and acquisition date**

- BSUs: Provided by each plan/environmental impact statement between May 2015 and October 2017.
- PHMAs and IHMAs: Provided by each plan/environmental impact statement between February 2016 and February 2020.
- Surface Management Agency: The BLM National Operations Center spatial data service accessed the national surface management agency compilation data on February 11, 2020.

**Datum, coordinate system, and projection**

- Geographic Coordinate System: GCS_North_American_1983
- Datum: D_North_American_1983
- Projected Coordinate System: NAD_1983_Albers
- Projection: Albers

# Results

## Question 1a. What is the amount of sagebrush availability and the change in the amount and condition of sagebrush availability?

We present sagebrush availability (EVT) at several scales of aggregation. First, we summed the calculations to illustrate the sagebrush availability across all 105 BSUs combined (table 1). Second, we summed BSUs within regions to illustrate the variation in sagebrush availability across the sage-grouse range. This scale of aggregation highlights the differences driving sagebrush loss (see results for question 4) between the eastern portion of the range, the Rocky Mountain Region (table 2), and the western portion of the range, the Great Basin Region (table 3). Finally, we present estimates of sagebrush availability for individual BSUs by each BLM state/land use plan in appendix 1.

Overall, 1.9 million acres, approximately 3%, of the existing sagebrush in PHMAs/IHMAs within BSUs was lost between 2012 and 2018. This loss reduced the total amount of PHMAs and IHMAs within BSUs that is existing sagebrush from 73% to 70%. Sagebrush loss has not been equal in BSUs between regions. The Great Basin Region, which had less PHMAs/IHMAs within BSUs in sagebrush at the onset of monitoring, experienced a greater loss of sagebrush than the PHMAs/IHMAs within the Rocky Mountain Region's BSUs (4.39% loss versus 1.79% loss, respectively). Appendix 1 details sagebrush loss by BSU and highlights which BSUs experienced the most loss of sagebrush in PHMAs/IHMAs. Several BSUs exceed 10% loss in both the Great Basin Region and Rocky Mountain Region.

Acres presented are rounded to the nearest whole number, while annual acreage changes and percentages are calculated from the raw analysis output data. This may lead to slight discrepancies if calculations are performed using the rounded acres summarized here. As acreages are summarized by additional categories (regions and surface management agency), error is introduced and reported acreages may not match overall acreage summaries.

**Table 1. Sagebrush Availability Aggregated to All BSUs**

| Year | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT | Annual Change | |
|---|---|---|---|---|
| | | | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT |
| **2012** | 44,876,095 | 73.16% | -26,750 | -0.09% |
| **2013** | 44,749,976 | 72.95% | -87,250 | -0.30% |
| **2014** | 44,534,124 | 72.60% | -43,010 | -0.15% |
| **2015** | 44,350,892 | 72.30% | -37,230 | -0.13% |
| **2016** | 44,260,274 | 72.16% | -268,107 | -0.91% |
| **2017** | 43,669,996 | 71.19% | -722,138 | -1.17% |
| **2018** | 42,947,858 | 70.02% | | |
| **Overall Change** | | | **-1,928,237** | **-3.14%** |

**Table 2. Sagebrush Availability Aggregated to Rocky Mountain BSUs**

| Year | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT | Annual Change | |
|---|---|---|---|---|
| | | | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT |
| **2012** | 23,486,922 | 79.66% | -26,750 | -0.09% |
| **2013** | 23,460,173 | 79.57% | -87,250 | -0.30% |
| **2014** | 23,372,922 | 79.28% | -43,010 | -0.15% |
| **2015** | 23,329,913 | 79.13% | -37,230 | -0.13% |
| **2016** | 23,292,683 | 79.01% | -268,107 | -0.91% |
| **2017** | 23,024,576 | 78.10% | -66,401 | -0.23% |
| **2018** | 22,958,175 | 77.87% | | |
| **Overall Change** | | | **-528,747** | **-1.79%** |

**Table 3. Sagebrush Availability Aggregated to Great Basin BSUs**

| Year | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT | Annual Change | |
|---|---|---|---|---|
| | | | Acres EVT in PHMAs/IHMAs within BSUs | % of PHMAs/IHMAs within BSUs that is EVT |
| **2012** | 21,389,172 | 67.14% | -99,369 | -0.31% |
| **2013** | 21,289,803 | 66.83% | -128,602 | -0.40% |
| **2014** | 21,161,202 | 66.42% | -140,222 | -0.44% |
| **2015** | 21,020,979 | 65.98% | -53,389 | -0.17% |
| **2016** | 20,967,591 | 65.82% | -322,171 | -1.01% |
| **2017** | 20,645,419 | 64.80% | -655,736 | -2.06% |
| **2018** | 19,989,683 | 62.75% | | |
| **Overall Change** | | | **-1,399,489** | **-4.39%** |

## Question 1b. What is the existing amount of sagebrush on the landscape and the change in the amount relative to the pre-Euro-American historical distribution of sagebrush (BpS)?

We present sagebrush availability (EVT) relative to the pre-Euro-American historical distribution of sagebrush (BpS) at several scales of aggregation. First, we summed the calculations to illustrate the sagebrush availability relative to potential across all 105 BSUs combined (table 4). Second, we summed BSUs within regions to illustrate the variation in sagebrush availability relative to potential across the sage-grouse range. This scale of aggregation highlights the differences driving sagebrush loss (see the results for question 4) between the eastern portion of the range, the Rocky Mountain Region (table 5), and the western portion of the range, the Great Basin Region (table 6). Finally, we present estimates of sagebrush availability relative to potential for individual BSUs by each BLM state/land use plan in appendix 2.

Framing sagebrush (EVT) loss in relation to pre-Euro-American settlement sagebrush potential (BpS) reduces variability in the calculations introduced by differing approaches to PHMA/IHMA delineation across the range. The percentages of BpS that are in EVT in PHMAs/IHMAs are greater than those of PHMAs/IHMAs in EVT because the BpS dataset results in a smaller area used as the denominator in each calculation (see methods for question 1b). Sagebrush loss is approximately 3.4% for all BSUs combined. The Rocky Mountain Region BSUs, experiencing less EVT loss than the Great Basin Region BSUs, have retained just under 84% of areas capable of supporting sagebrush vegetation communities (BpS) in sagebrush (EVT). The Great Basin Region's 4.8% loss of EVT in BSUs has reduced the percent of areas capable of supporting sagebrush communities to just under 69% in sagebrush through 2018.

Acres presented are rounded to the nearest whole number, while annual acreage changes and percentages are calculated from the raw analysis output data. This may lead to slight discrepancies if calculations are performed using the rounded acres summarized here. As acreages are summarized by additional categories (regions and surface management agency), error is introduced and reported acreages may not match overall acreage summaries.

**Table 4. Sagebrush Availability Relative to Potential, Aggregated to All BSUs**

| Year | Acres BpS in PHMAs/IHMAs within BSUs | % of BpS that is EVT in PHMAs/IHMAs within BSUs | Annual Change in % of BpS that is EVT in PHMAs/IHMAs within BSUs |
|---|---|---|---|
| 2012 | 56,494,631 | 79.43% | -0.22% |
| 2013 | | 79.21% | -0.38% |
| 2014 | | 78.83% | -0.33% |
| 2015 | | 78.50% | -0.16% |
| 2016 | | 78.34% | -1.04% |
| 2017 | | 77.30% | -1.28% |
| 2018 | | 76.02% | |
| **Overall Change** | | | **-3.41%** |

**Table 5. Sagebrush Availability Relative to Potential Aggregated to Rocky Mountain BSUs**

| Year | Acres BpS in PHMAs/IHMAs within BSUs | % of BpS that is EVT in PHMAs/IHMAs within BSUs | Annual Change in % of BpS that is EVT in PHMAs/IHMAs within BSUs |
|---|---|---|---|
| 2012 | 27,372,501 | 85.80% | -0.10% |
| 2013 | | 85.71% | -0.32% |
| 2014 | | 85.39% | -0.16% |
| 2015 | | 85.23% | -0.14% |
| 2016 | | 85.10% | -0.98% |
| 2017 | | 84.12% | -0.24% |
| 2018 | | 83.87% | |
| **Overall Change** | | | **-1.93%** |

**Table 6. Sagebrush Availability Relative to Potential Aggregated to Great Basin BSUs**

| Year | Acres BpS in PHMAs/IHMAs within BSUs | % of BpS that is EVT in PHMAs/IHMAs within BSUs | Annual Change in % of BpS that is EVT in PHMAs/IHMAs within BSUs |
|---|---|---|---|
| 2012 | 29,122,130 | 73.45% | -0.34% |
| 2013 | | 73.11% | -0.44% |
| 2014 | | 72.66% | -0.48% |
| 2015 | | 72.18% | -0.18% |
| 2016 | | 72.00% | -1.11% |
| 2017 | | 70.89% | -2.25% |
| 2018 | | 68.64% | |
| **Overall Change** | | | **-4.81%** |

## Question 1c. What is the trend and condition of the indicators describing sagebrush characteristics important to sage-grouse?

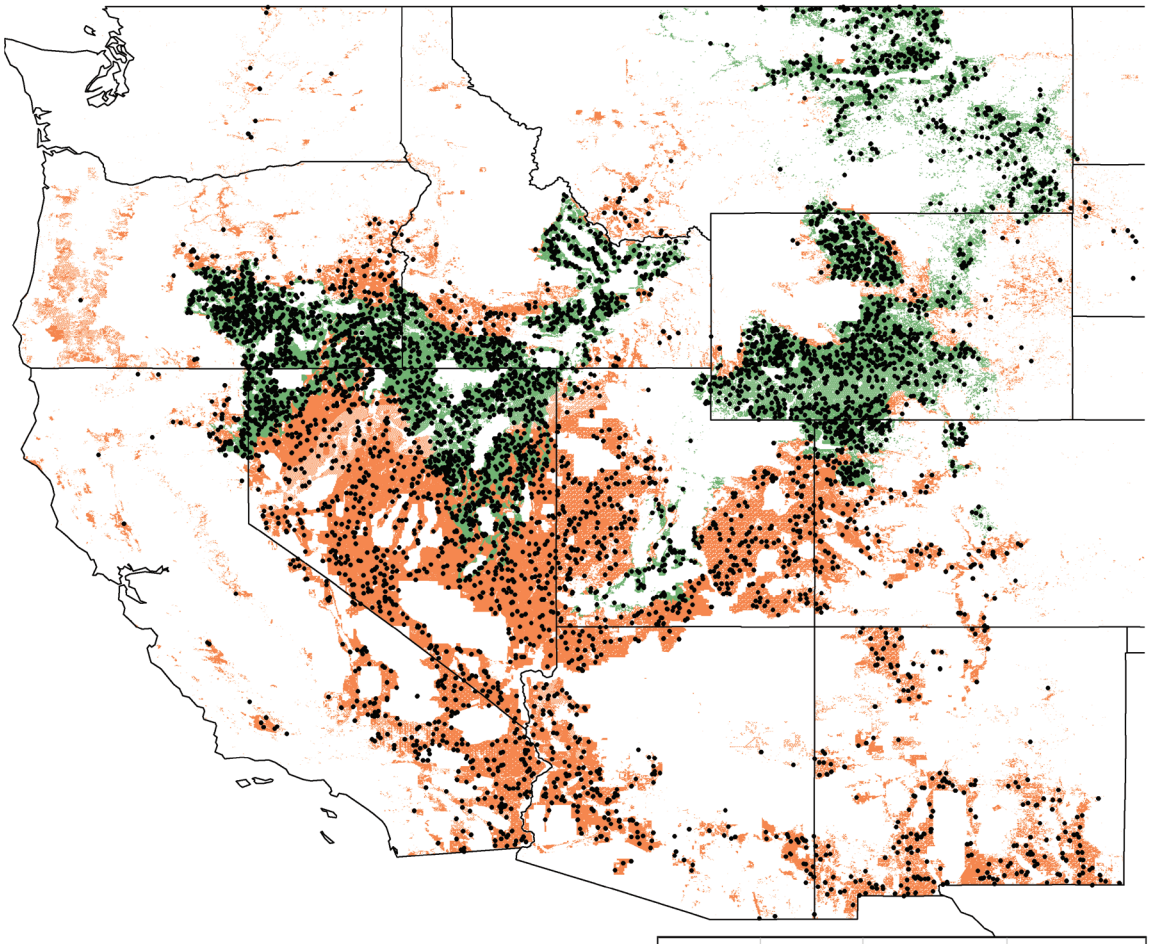
In addition to the amount of sagebrush available for habitat, habitat condition is an important factor for Greater Sage-Grouse survival. To address habitat condition, we identified monitoring plot locations (figure 1) and summarized indicator data for type I locations within Greater Sage-Grouse habitat (table 7) and type II locations outside of habitat areas (table 8).

Many indicators of habitat condition for Greater Sage-Grouse within type I habitat areas appear to be static or improving on BLM rangelands Westwide from 2013 to 2018. The average percent of sagebrush cover shows a small improvement (figure 2). Sagebrush height is relatively static (figure 3). The proportion of columnar-shaped sagebrush remains low (figure 4). Nearly all (about 90%) sagebrush is spreading in shape (figure 5), which is thought to be more beneficial for hiding cover. The proportions of sagebrush shape have stayed generally constant through time. Percent cover of perennial grasses and forbs is increasing (figure 6). Mean herbaceous plant species height shows modest increases over time (figure 7). Average percent bare ground, a broader indicator of ecosystem health, has varied over time, but overall, it has decreased since 2013 (figure 8).

However, invasive plants are a threat to Greater Sage-Grouse habitat condition that appears to be increasing within type I Greater Sage-Grouse habitat areas. Invasive plants were present on nearly 70% of habitat in 2018, a number that has increased from a little over 50% in 2013 (figure 9). The percent of rangelands where invasive plants were abundant (≥25% of vegetation cover) has also increased, from about 10% in 2013 to nearly 30% in 2018 (figure 10). Annual grasses such as cheatgrass (*Bromus tectorum*) and medusahead (*Taeniatherum capitatum*) are important components of invasion that make up about 15% of vegetation on average, an increase of 7% over the last 5 years (figure 11). The proportion of vegetation that is composed of all invasive plants is also steadily increasing from 7% in 2013 to 17% in 2018 (figure 12).

Estimates of the same indicators outside of Greater Sage-Grouse habitat across BLM rangelands (type II areas) provide context for condition and changes in habitat quality. In general, these lands are more arid than habitat areas and are located further south and west and at lower elevations. It is therefore not surprising that indicator values on these lands are generally less favorable for Greater Sage-Grouse. A notable exception is the presence of invasive plants, which occurs in a higher proportion in Greater Sage-Grouse habitat. However, changes in all indicators over time are often similar in direction. Refer to table 8 and figures 2 through 12 for the type II estimates.

To put indicator values in context in terms of habitat condition within a particular state, refer to the state monitoring reports (appendices 7–15).




| Year | Type | BLM Sample | BLM Acres |
|---|---|---|---|
| 2013 | I | 1,416 | 52,516,548 |
| 2013 | II | 577 | 100,355,684 |
| 2014 | I | 1,481 | 53,170,382 |
| 2014 | II | 686 | 110,743,171 |
| 2015 | I | 1,342 | 52,991,622 |
| 2015 | II | 621 | 108,396,312 |
| 2016 | I | 1,483 | 53,329,663 |
| 2016 | II | 787 | 108,772,929 |
| 2017 | I | 1,534 | 53,437,770 |
| 2017 | II | 531 | 105,122,253 |
| 2018 | I | 1,036 | 52,330,851 |
| 2018 | II | 510 | 103,048,838 |

**Figure 1. Map of monitoring plot locations in the Landscape Monitoring Framework including plot count by year.**

**Table 7. Indicators of Habitat Condition for Greater Sage-Grouse Habitat within Habitat Areas (Type I) (estimates include 80% confidence interval)**

| Type I | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 12% (+1/-1) | 12% (+0/-0) | 13% (+0/-0) | 13% (+1/-1) | 14% (+1/-1) | 14% (+1/-1) |
| Mean sagebrush species height in inches on BLM rangelands | 13.5 inches (+0.4/-0.4) | 13.9 inches (+0.3/-0.3) | 14.6 inches (+0.3/-0.3) | 15.5 inches (+0.3/-0.3) | 14.9 inches (+0.5/-0.5) | 14.5 inches (+0.4/-0.4) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 12% (+1/-1) | 8% (+1/-1) | 8% (+1/-1) | 11% (+1/-1) | 13% (+1/-1) | 13% (+1/-1) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 88% (+1/-1) | 92% (+1/-1) | 92% (+1/-1) | 89% (+1/-1) | 87% (+1/-1) | 87% (+1/-1) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 27% (+1/-1) | 29% (+1/-1) | 29% (+1/-1) | 34% (+1/-1) | 35% (+1/-1) | 33% (+2/-2) |
| Mean herbaceous plant species height in inches on BLM rangelands | 7.7 inches (+0.2/-0.2) | 10.2 inches (+0.3/-0.3) | 10.9 inches (+0.2/-0.2) | 11.4 inches (+0.2/-0.2) | 11.2 inches (+0.2/-0.2) | 10.6 inches (+0.3/-0.3) |
| Percent cover of bare ground on BLM rangelands | 26% (+1/-1) | 28% (+1/-1) | 27% (+1/-1) | 22% (+1/-1) | 21% (+1/-1) | 21% (+1/-1) |
| Proportion of BLM rangelands with nonnative invasive species present | 54% (+2/-2) | 61% (+3/-3) | 64% (+2/-2) | 66% (+2/-2) | 69% (+3/-3) | 66% (+2/-2) |
| Proportion of BLM rangelands where ≥25% of foliar cover is comprised of nonnative invasive species | 10% (+1/-1) | 16% (+1/-1) | 19% (+1/-1) | 22% (+1/-1) | 23% (+2/-2) | 29% (+2/-2) |
| Proportion of vegetation composed of annual grasses on BLM rangelands | 7% (+1/-1) | 8% (+1/-1) | 10% (+1/-1) | 12% (+1/-1) | 13% (+1/-1) | 14% (+1/-1) |
| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 7% (+1/-1) | 9% (+1/-1) | 12% (+1/-1) | 14% (+1/-1) | 15% (+1/-1) | 17% (+1/-1) |

**Table 8. Indicators of Habitat Condition for Greater Sage-Grouse Habitat Outside Habitat Areas (Type II) (estimates include 80% confidence interval)**

| Type II | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 5% (+1/-1) | 4% (+0/-0) | 4% (+1/-1) | 4% (+0/-0) | 4% (+1/-1) | 5% (+1/-1) |
| Mean sagebrush species height in inches on BLM rangelands | 16.2 inches (+1.0/-1.0) | 13.8 inches (+0.6/-0.6) | 14.3 inches (+0.8/-0.8) | 14.1 inches (+0.7/-0.7) | 14.6 inches (+0.9/-0.9) | 13.7 inches (+0.9/-0.9) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 14% (+4/-4) | 10% (+3/-3) | 11% (+2/-2) | 11% (+3/-3) | 17% (+4/-4) | 13% (+4/-4) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 86% (+4/-4) | 90% (+3/-3) | 89% (+2/-2) | 89% (+3/-3) | 83% (+4/-4) | 87% (+4/-4) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 14% (+1/-1) | 15% (+1/-1) | 14% (+1/-1) | 14% (+1/-1) | 14% (+1/-1) | 14% (+2/-2) |
| Mean herbaceous plant species height in inches on BLM rangelands | 6.8 inches (+0.4/-0.4) | 7.5 inches (+0.3/-0.3) | 8.1 inches (+0.3/-0.3) | 8.0 inches (+0.3/-0.3) | 8.0 inches (+0.3/-0.3) | 7.6 inches (+0.3/-0.3) |
| Percent cover of bare ground on BLM rangelands | 32% (+2/-2) | 28% (+1/-1) | 29% (+1/-1) | 32% (+2/-2) | 29% (+1/-1) | 26% (+2/-2) |
| Proportion of BLM rangelands with nonnative invasive species present | 56% (+3/-3) | 53% (+3/-3) | 58% (+3/-3) | 62% (+3/-3) | 64% (+3/-3) | 57% (+4/-4) |
| Proportion of BLM rangelands where ≥25% of foliar cover is comprised of nonnative invasive species | 21% (+3/-3) | 18% (+2/-2) | 16% (+2/-2) | 24% (+3/-3) | 32% (+3/-3) | 24% (+4/-4) |
| Proportion of vegetation composed of annual grasses on BLM rangelands | 10% (+1/-1) | 8% (+1/-1) | 7% (+1/-1) | 10% (+1/-1) | 14% (+2/-2) | 11% (+2/-2) |
| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 13% (+2/-2) | 11% (+1/-1) | 11% (+1/-1) | 15% (+1/-1) | 20% (+2/-2) | 15% (+2/-2) |

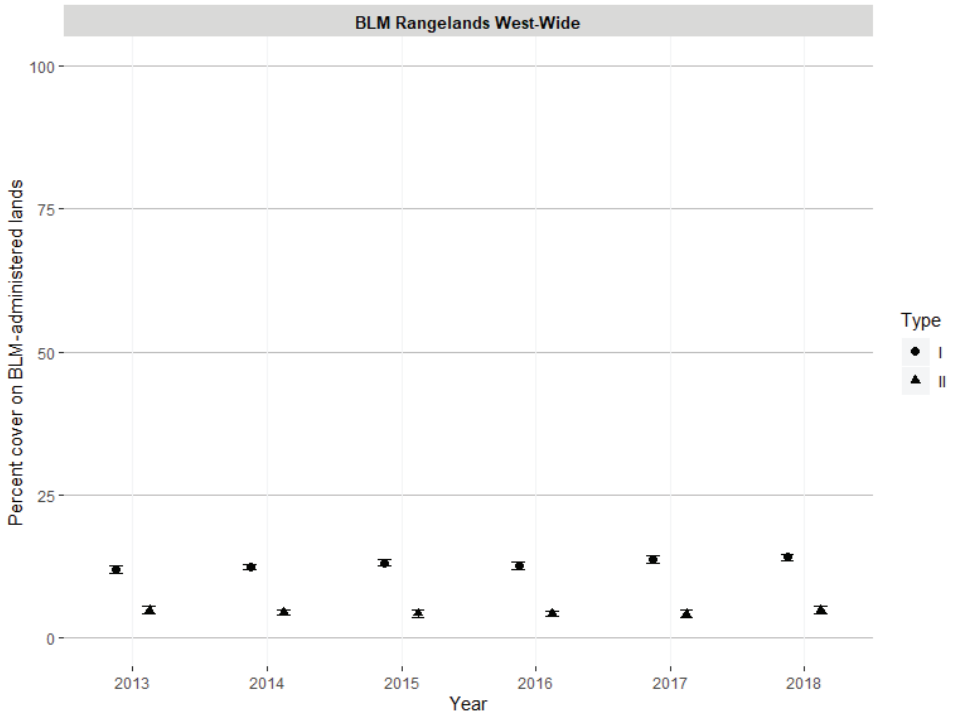



**Figure 2. Percent cover of sagebrush on BLM rangelands (80% confidence interval).**

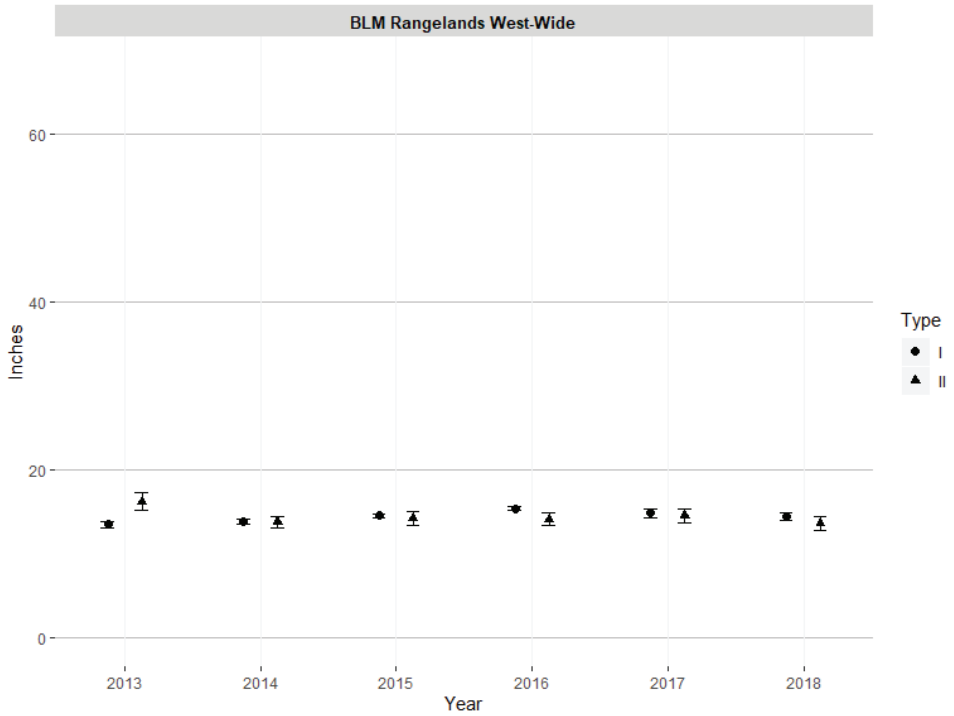



**Figure 3. Mean sagebrush species height in inches on BLM rangelands (80% confidence interval).**

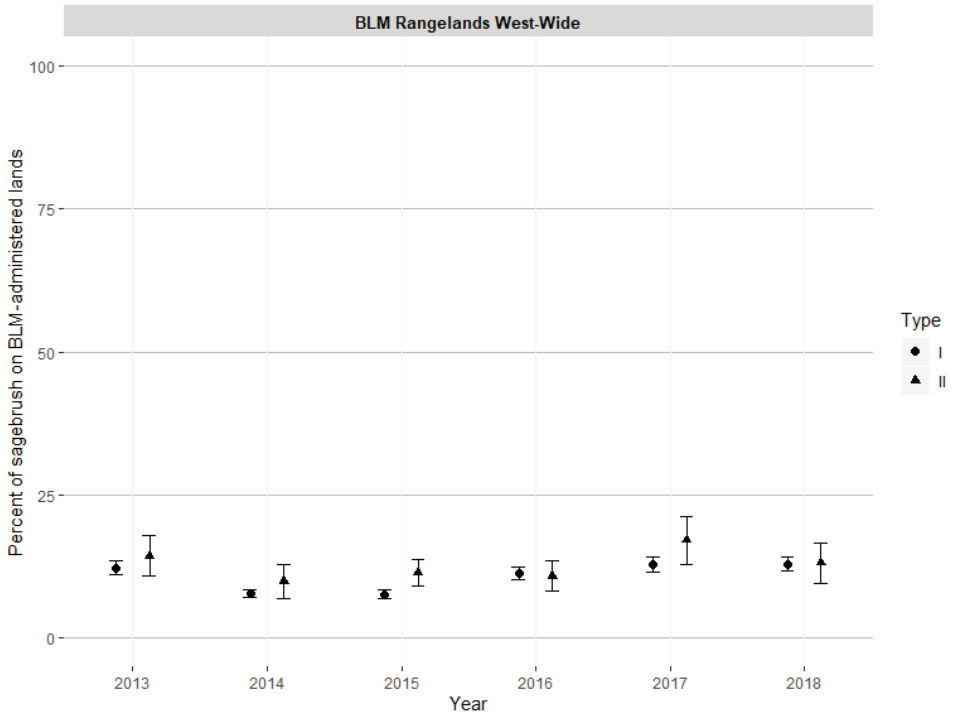



**Figure 4. Proportion of sagebrush that is columnar shaped on BLM rangelands (80% confidence interval).**

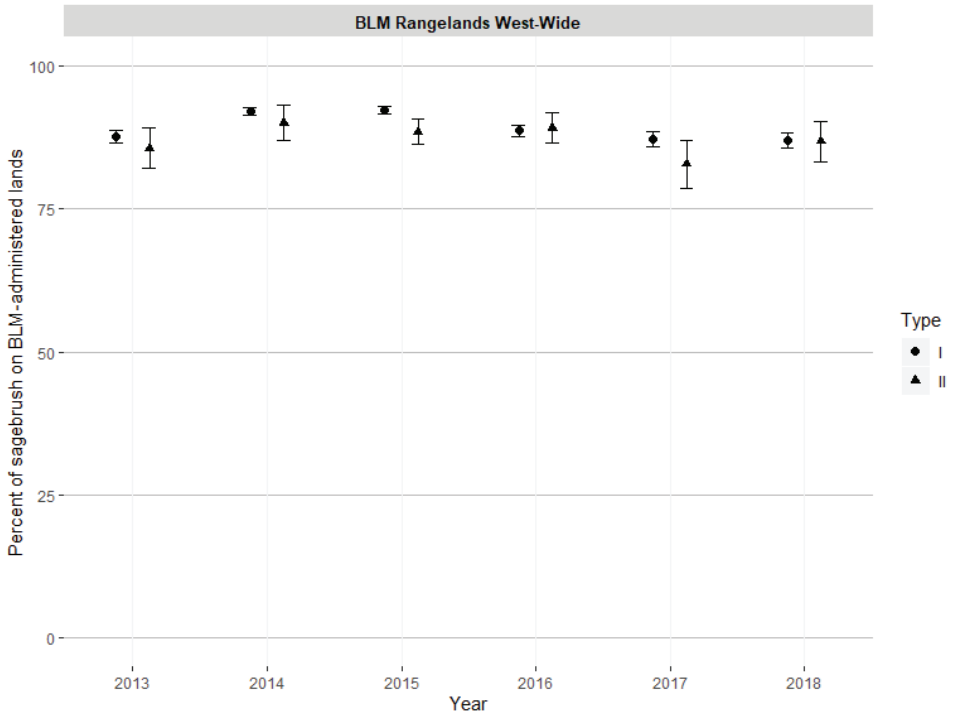



**Figure 5. Proportion of sagebrush that is spreading shaped on BLM rangelands (80% confidence interval).**

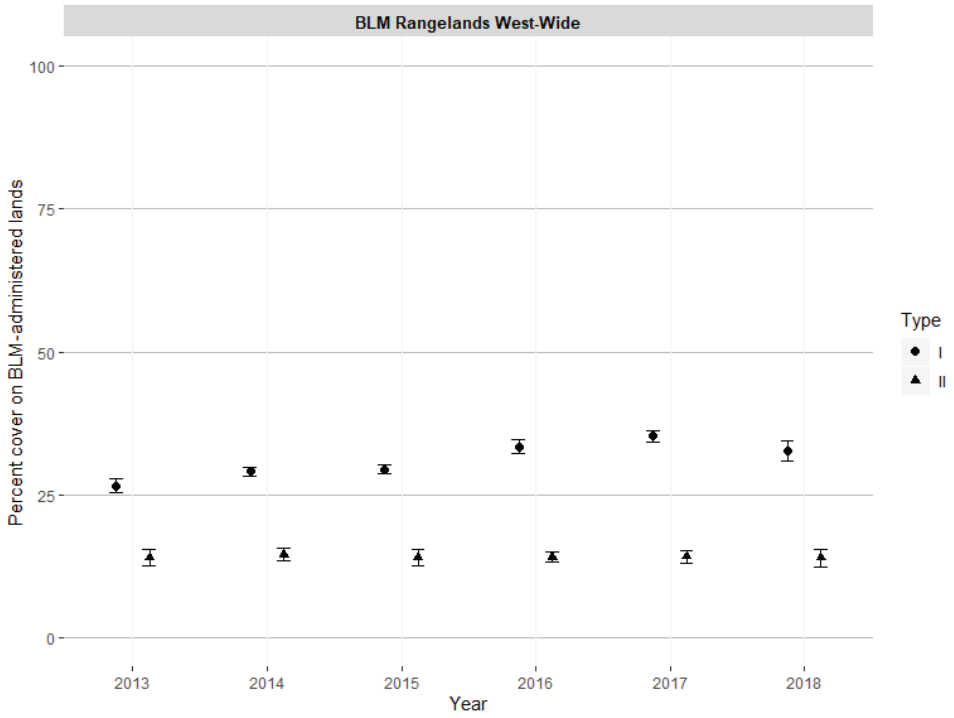



**Figure 6. Percent cover of perennial grasses and perennial forbs on BLM rangelands (80% confidence interval).**

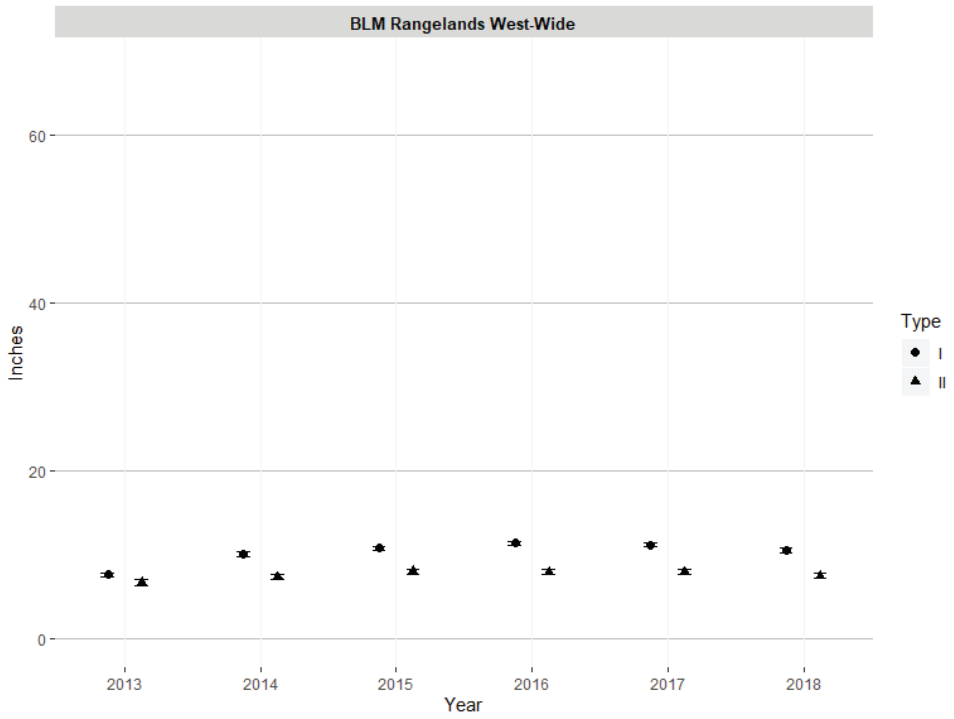



**Figure 7. Mean herbaceous plant species height in inches on BLM rangelands (80% confidence interval).**

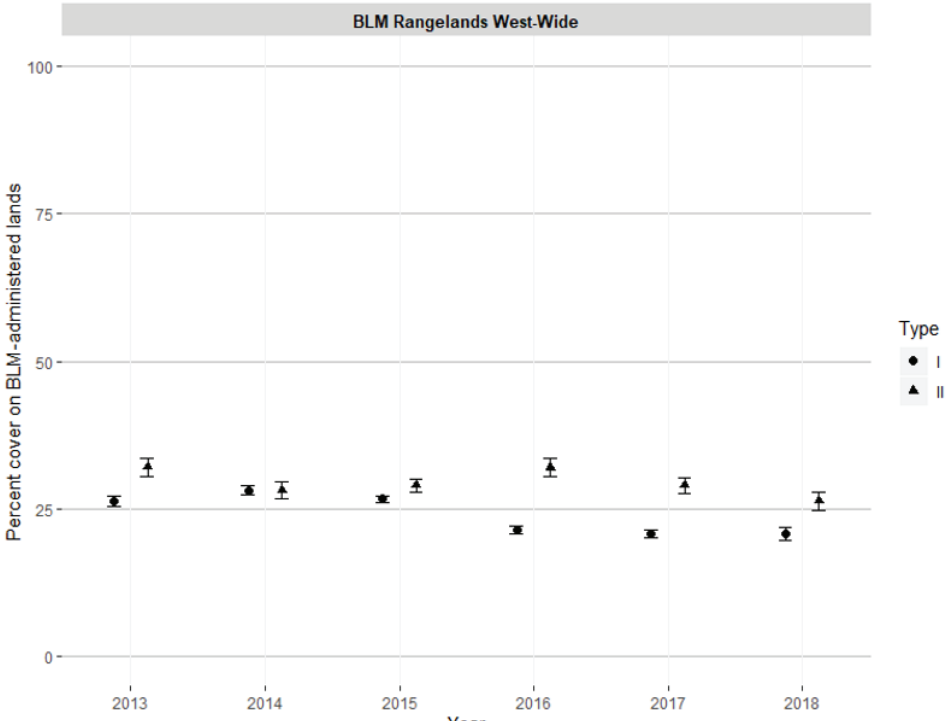



**Figure 8. Percent cover of bare ground on BLM rangelands (80% confidence interval).**

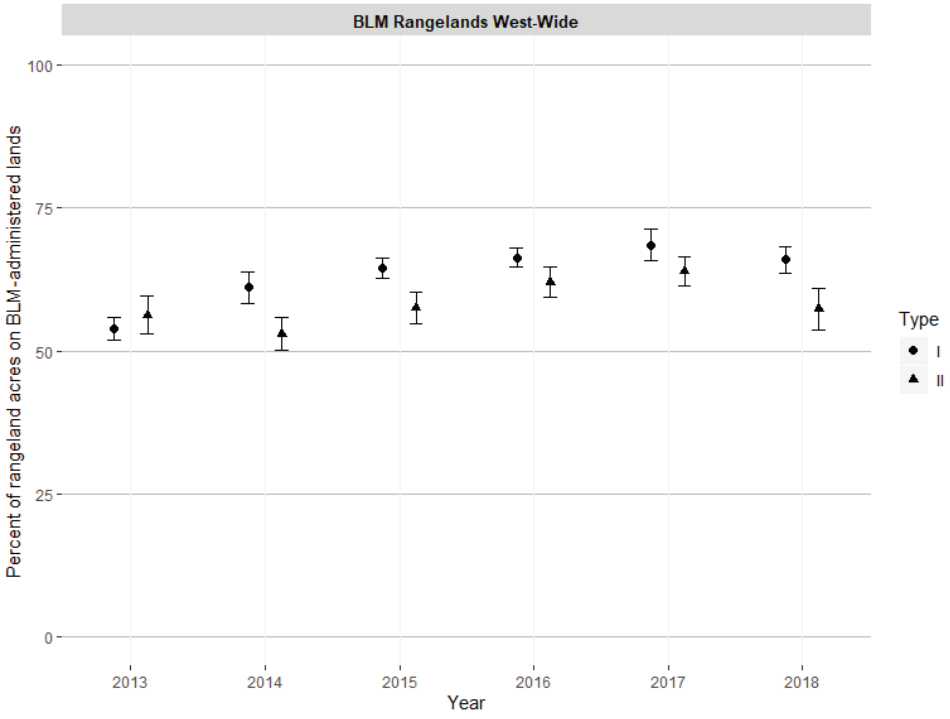



**Figure 9. Proportion of BLM rangelands with nonnative invasive species present (80% confidence interval).**

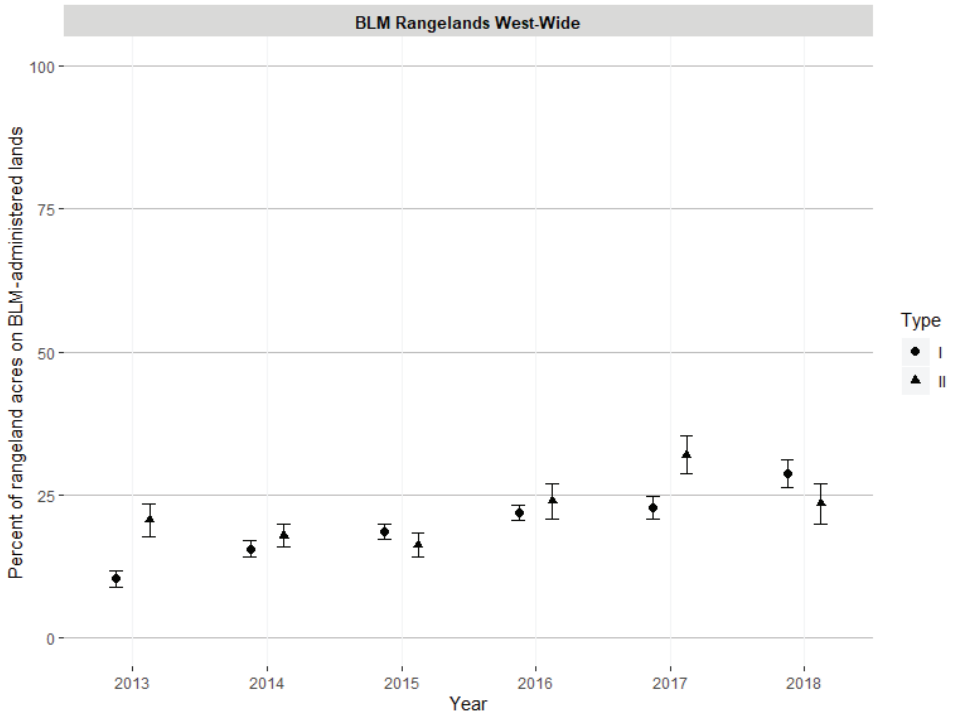



**Figure 10. Proportion of BLM rangelands where nonnative invasive species are abundant (≥25% of vegetation cover) (80% confidence interval).**

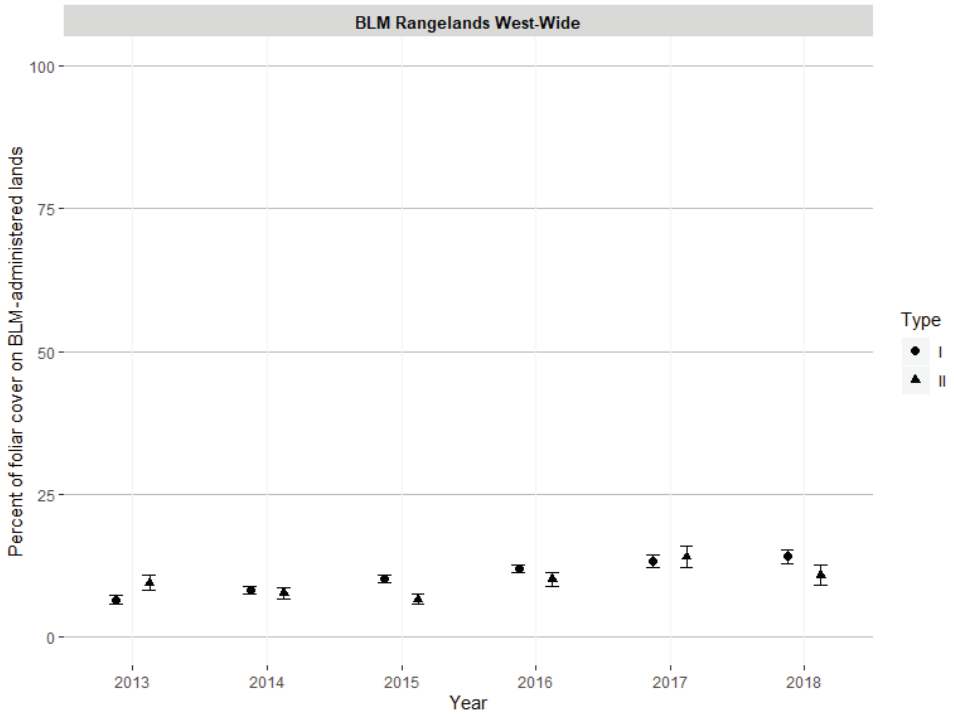



**Figure 11. Proportion of vegetation composed of annual grasses on BLM rangelands (80% confidence interval).**

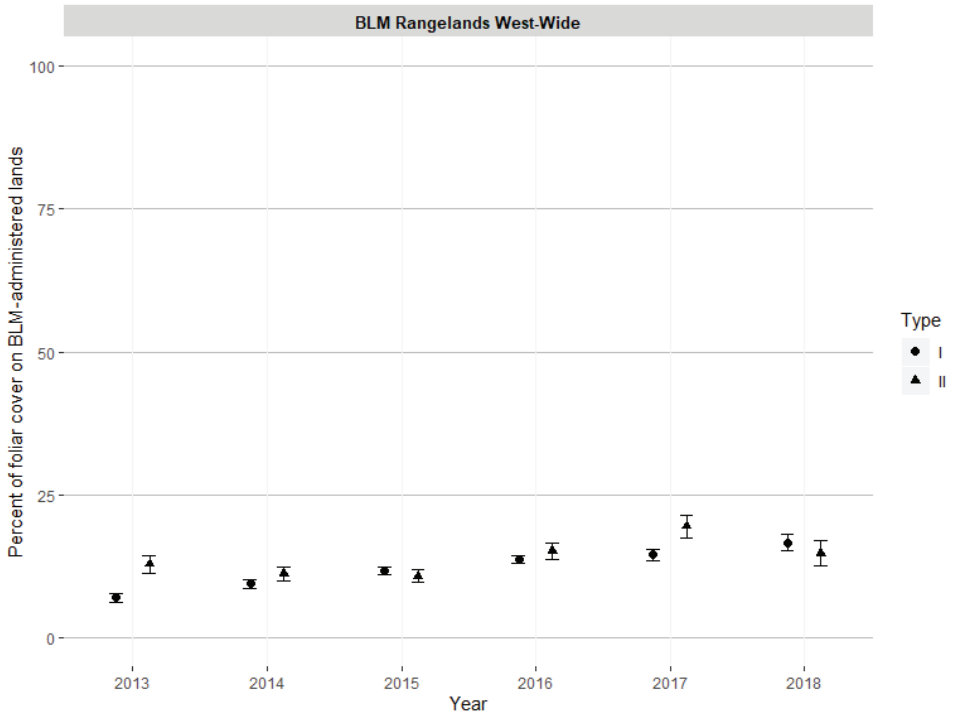



**Figure 12. Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands (80% confidence interval).**

## Question 2a. What is the amount of habitat degradation and the change in that amount?

We present estimated anthropogenic disturbance footprint acreages at several scales of aggregation. First, we summed the calculations to illustrate the estimated disturbance levels across all 105 BSUs combined (table 9). Second, we summed BSUs within regions to illustrate the variation in disturbance across the range (tables 10 and 11). Finally, we present estimates of disturbance and change in disturbance for individual BSUs by surface management agency and each BLM state/land use plan in appendices 3 and 4.

Collectively, the estimated percent of PHMAs/IHMAs disturbed across all BSUs increased since 2015 by approximately 17,000 acres, representing a total increase of 0.03%. The estimated percent of PHMAs/IHMAs disturbed in 2020 remains below 1% as a whole. Comparing the regional aggregations, the Rocky Mountain Region's increase in estimated percent of PHMAs/IHMAs disturbed is double that of the Great Basin Region at 0.04% versus 0.02%, respectively. While the increase is not uniform between the two regions, the estimated percent of PHMAs/IHMAs disturbed remains below 1% for both.

Acres presented are rounded to the nearest whole number, while annual acreage changes and percentages are calculated from the raw analysis output data. This may lead to slight discrepancies if calculations are performed using the rounded acres summarized here. As acreages are summarized by additional categories (regions and surface management agency), error is introduced and reported acreages may not match overall acreage summaries.

**Table 9. Disturbance Estimates Aggregated to all BSUs**

| Year | Acres PHMAs/IHMAs within BSUs | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs | Annual Change | |
|---|---|---|---|---|---|
| | | | | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs |
| **2015** | 61,340,226 | 423,869 | 0.69% | 10,820 | 0.02% |
| **2016** | | 434,688 | 0.71% | 3,236 | 0.00% |
| **2017** | | 437,924 | 0.71% | 864 | 0.01% |
| **2018** | | 438,789 | 0.72% | 3,645 | 0.00% |
| **2019** | | 442,433 | 0.72% | -1,285 | 0.00% |
| **2020** | | 441,149 | 0.72% | | |
| **Overall Change** | | | | **17,280** | **0.03%** |

**Table 10. Disturbance Estimates Aggregated to BSUs in the Rocky Mountain Region**

| Year | Acres PHMAs/IHMAs within BSUs | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs | Annual Change | |
|---|---|---|---|---|---|
| | | | | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs |
| **2015** | 29,482,127 | 222,544 | 0.76% | 7,076 | 0.02% |
| **2016** | | 229,620 | 0.78% | 2,501 | 0.01% |
| **2017** | | 232,120 | 0.79% | 198 | 0.00% |
| **2018** | | 232,319 | 0.79% | 2,530 | 0.01% |
| **2019** | | 234,849 | 0.80% | -398 | 0.00% |
| **2020** | | 234,450 | 0.80% | | |
| **Overall Change** | | | | **11,907** | **0.04%** |

**Table 11. Disturbance Estimates Aggregated to BSUs in the Great Basin Region**

| Year | Acres PHMAs/IHMAs within BSUs | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs | Annual Change | |
|---|---|---|---|---|---|
| | | | | Acres PHMAs/IHMAs Disturbed within BSUs | % PHMAs/IHMAs Disturbed within BSUs |
| **2015** | 31,858,813 | 201,332 | 0.63% | 3,741 | 0.01% |
| **2016** | | 205,073 | 0.64% | 735 | <0.01% |
| **2017** | | 205,808 | 0.65% | 666 | <0.01% |
| **2018** | | 206,474 | 0.65% | 1,115 | <0.01% |
| **2019** | | 207,589 | 0.65% | -900 | <0.01% |
| **2020** | | 206,689 | 0.65% | | |
| **Overall Change** | | | | **5,357** | **0.02%** |

## Question 2b. What is the intensity of activities and the change in the intensity?

We present estimated density of energy and mining features at several scales of aggregation. First, we summed the calculations to illustrate the estimated density levels across all 105 BSUs combined (table 12). Second, we summed BSUs within regions to illustrate the variation in energy and mining density across the range (tables 13 and 14). Finally, we present estimates of density for individual BSUs by each BLM state/land use plan in appendix 5.

Annual variation in counts of energy and mining features ranges from a decrease of several hundred to an increase of several hundred across the range; however, the cumulative change in count and density remains negligible (decrease of 120 features overall and a cumulative density change of <-0.01 facilities per 640 acres). The regional summaries illustrate that the Rocky Mountain Region began and maintained the highest density of energy and mining features (approximately 0.20 features per 640 acres), yet the change remains minimal over time (<-0.01 change in features per 640 acres). The Great Basin Region analysis reflects a lack of large-scale energy development, with density estimates constant across the monitoring period (approximately 0.01 features per 640 acres).

**Table 12. Density Estimates, Aggregated to All BSUs**

| Year | Acres PHMAs/IHMAs within BSUs | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) | Annual Change | |
|---|---|---|---|---|---|
| | | | | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) |
| **2015** | 61,340,226 | 9,089 | 0.09 | -428 | <-0.01 |
| **2016** | | 8,661 | 0.09 | 272 | <0.01 |
| **2017** | | 8.933 | 0.09 | 228 | 0.01 |
| **2018** | | 9,161 | 0.10 | -238 | -0.01 |
| **2019** | | 8,923 | 0.09 | 46 | <0.01 |
| **2020** | | 8,969 | 0.09 | | |
| **Overall Change** | | | | **-120** | **<-0.01** |

**Table 13. Density Estimates, Aggregated to BSUs in the Rocky Mountain Region**

| Year | Acres PHMAs/IHMAs within BSUs | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) | Annual Change | |
|---|---|---|---|---|---|
| | | | | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) |
| **2015** | 29,482,127 | 8,804 | 0.19 | -376 | -0.01 |
| **2016** | | 8,428 | 0.18 | 245 | 0.01 |
| **2017** | | 8,673 | 0.19 | 227 | <0.01 |
| **2018** | | 8,900 | 0.19 | -238 | <-0.01 |
| **2019** | | 8,662 | 0.19 | 40 | <0.01 |
| **2020** | | 8,702 | 0.19 | | |
| **Overall Change** | | | | **-120** | **<-0.01** |

**Table 14. Density Estimates, Aggregated to BSUs in the Great Basin Region**

| Year | Acres PHMAs/IHMAs within BSUs | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) | Annual Change | |
|---|---|---|---|---|---|
| | | | | Energy and Mining Feature Count in PHMAs/IHMAs within BSUs | Density in PHMAs/IHMAs within BSUs (# per 640 acres) |
| **2015** | 31,858,813 | 285 | 0.01 | -52 | -0.01 |
| **2016** | | 233 | 0.00 | 27 | <0.01 |
| **2017** | | 260 | 0.01 | 1 | <0.01 |
| **2018** | | 261 | 0.01 | 0 | 0.00 |
| **2019** | | 261 | 0.01 | 6 | <0.01 |
| **2020** | | 267 | 0.01 | | |
| **Overall Change** | | | | **-18** | **<-0.01** |

## Question 2c. What is the amount of reclaimed energy-related degradation and the change in the amount?

Reclamation of oil and gas related degradation, as determined via the methods described in this report, occurred in Wyoming, Colorado, Utah, and Montana. In total, 665 acres of previous degradation was reclaimed since 2015 (table 15). The BLM's corporate datasets may not be comprehensive enough to answer this question, indicating a need to improve our data collection and data management for reclamation activities.

**Table 15. Estimates of Final Reclamation at Plugged and Abandoned Oil and Gas Wells in PHMAs and IHMAs Based on Approved Final Abandonment Notices per the BLM's Automated Fluid Minerals Support System**

| States | Number of Approved Final Abandonment Notices | | Total |
|---|---|---|---|
| | Latitude/Longitude Method | Legal Land Descriptions Method | |
| WY | 81 | 38 | 119 |
| CO | 6 | 3 | 9 |
| UT | 1 | 0 | 1 |
| MT | 0 | 4 | 4 |
| **Total Number** | **88** | **45** | **133** |
| **Total Acres** | **440** | **225** | **665** |

## Question 3. What is the population estimation of sage-grouse and the change in the population estimation?

State by state summaries of sage-grouse population data shared with the BLM state offices by the state wildlife agencies can be found in the state monitoring reports (appendices 7–15). The overall population trends of sage-grouse were published in the USGS rangewide population monitoring report (Coates et al. 2021).

## Question 4. How are the BLM and USFS contributing to changes in the amount of sagebrush?

Change over time in sagebrush availability, as described in detail in the monitoring framework, is largely driven by factors that the BLM does not control (i.e., the factors do not reflect discretionary actions or authorizations). The one exception would be the impervious surface dataset applied to generate the 2012 and 2017 sagebrush availability data. Discretionary actions or authorizations may be reflected in this sagebrush removal dataset via road construction and other actions that would create a surface that the National Land Cover Database classifies as impervious.

We summarize the annual and cumulative change in sagebrush availability similarly to the results for questions 1a and 1b, identifying both the factor causing loss (wildfire, agricultural conversion, impervious surface, and any combination of these where they co-occurred) and the surface management agency for the acres on which the losses occurred. We also summarize sagebrush loss estimates as a percentage of total timeframe loss. We present all estimates at several scales of aggregation. First, we present the sagebrush loss estimates aggregated across all 105 BSUs combined (tables 16 and 17). Second, we present BSUs within the Rocky Mountain Region (tables 18 and 19) and the Great Basin Region (tables 20 and 21) to illustrate the regional variation in

sagebrush loss estimates. We present the sagebrush loss estimates by cause and surface management agency for individual BSUs by each BLM state/land use plan in appendix 6.

Collectively, the BLM-managed land had the largest percent of the total sagebrush loss across the monitoring period (56%), followed by private lands (32%). The primary driver of sagebrush loss across all PHMAs/IHMAs within BSUs is wildfire, which accounted for the largest percent of the total loss (72%), followed by impervious surface (16%), and agriculture conversion (12%). The loss to impervious surfaces applied to generate the 2017 EVT dataset spans the majority of the monitoring period (2012–2017) and may contain existing development on the landscape that was mapped differently than in the previous impervious dataset used to generate the 2012 baseline EVT. For example, a road may be represented in both datasets; however, its extent differs slightly when comparing the two. Such differences, attributable to updated imagery and its subsequent classification into impervious surfaces, may lead to overreporting the loss of sagebrush.

Looking at regional drivers of sagebrush loss, the percent of the total loss from agricultural conversion (38%) and wildfire (34%) outpace impervious surface (27%) in the Rocky Mountain Region, with the majority of loss (66%) occurring on private lands, followed by BLM-managed lands (26%). In the Great Basin Region, the majority of the total sagebrush loss is due to wildfire (87%), followed by impervious surface (12%) and agriculture conversion (2%), most of which has primarily occurred on BLM-managed lands (68%) versus private lands (19%).

Acres presented are rounded to the nearest whole number, while annual acreage changes and percentages are calculated from the raw analysis output data. This may lead to slight discrepancies if calculations are performed using the rounded acres summarized here. As acreages are summarized by additional categories (regions and surface management agency), error is introduced and reported acreages may not match overall acreage summaries.

**Table 16. Sagebrush Loss Estimates (Acres) by Cause and Surface Management Agency Aggregated to all BSUs**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 1,910 | 70,407 | N/A | 2 | N/A | N/A | 72,320 |
| | Forest Service | 133 | 3,322 | N/A | 0 | N/A | N/A | 3,455 |
| | Other Federal | 65 | 2,383 | N/A | 0 | N/A | N/A | 2,448 |
| | State | 846 | 4,836 | N/A | 0 | N/A | N/A | 5,682 |
| | Private | 23,243 | 18,806 | N/A | 7 | N/A | N/A | 42,056 |
| | Other | 93 | 64 | N/A | 0 | N/A | N/A | 158 |
| | **Total** | **26,290** | **99,819** | **N/A** | **9** | **N/A** | **N/A** | **126,118** |
| 2013 - 2014 | Bureau of Land Management | 7,528 | 87,272 | N/A | 10 | N/A | N/A | 94,811 |
| | Forest Service | 78 | 414 | N/A | 0 | N/A | N/A | 492 |
| | Other Federal | 291 | 0 | N/A | 0 | N/A | N/A | 291 |
| | State | 3,232 | 5,913 | N/A | 2 | N/A | N/A | 9,147 |
| | Private | 59,102 | 51,749 | N/A | 135 | N/A | N/A | 110,986 |
| | Other | 125 | 0 | N/A | 0 | N/A | N/A | 125 |
| | **Total** | **70,356** | **145,349** | **N/A** | **147** | **N/A** | **N/A** | **215,852** |
| 2014 - 2015 | Bureau of Land Management | 4,797 | 110,822 | N/A | 2 | N/A | N/A | 115,621 |
| | Forest Service | 153 | 142 | N/A | 0 | N/A | N/A | 295 |
| | Other Federal | 81 | 100 | N/A | 0 | N/A | N/A | 181 |
| | State | 1,552 | 4,965 | N/A | 0 | N/A | N/A | 6,517 |
| | Private | 34,810 | 25,506 | N/A | 17 | N/A | N/A | 60,333 |
| | Other | 147 | 138 | N/A | 0 | N/A | N/A | 285 |
| | **Total** | **41,540** | **141,673** | **N/A** | **19** | **N/A** | **N/A** | **183,232** |
| 2015 - 2016 | Bureau of Land Management | 5,474 | 38,132 | N/A | 13 | N/A | N/A | 43,619 |
| | Forest Service | 72 | 46 | N/A | 0 | N/A | N/A | 119 |
| | Other Federal | 55 | 0 | N/A | 0 | N/A | N/A | 55 |
| | State | 1,646 | 1,299 | N/A | 0 | N/A | N/A | 2,944 |
| | Private | 29,394 | 14,321 | N/A | 15 | N/A | N/A | 43,730 |
| | Other | 152 | 0 | N/A | 0 | N/A | N/A | 152 |
| | **Total** | **36,792** | **53,798** | **N/A** | **29** | **N/A** | **N/A** | **90,618** |
| 2016 - 2017 | Bureau of Land Management | 3,738 | 139,804 | 159,674 | 8 | 22 | 427 | 303,672 |
| | Forest Service | 69 | 4,784 | 17,009 | 0 | 0 | 61 | 21,924 |
| | Other Federal | 88 | 419 | 5,940 | 0 | 1 | 1 | 6,449 |
| | State | 1,831 | 9,338 | 17,493 | 2 | 10 | 48 | 28,722 |
| | Private | 30,736 | 89,205 | 105,525 | 42 | 263 | 461 | 226,232 |
| | Other | 521 | 353 | 2,400 | 0 | 1 | 3 | 3,279 |
| | **Total** | **36,984** | **243,904** | **308,042** | **52** | **297** | **1,000** | **590,278** |

**Table 16 (*continued*). Sagebrush Loss Estimates (Acres) by Cause and Surface Management Agency Aggregated to all BSUs**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2017 - 2018 | Bureau of Land Management | 2,334 | 454,271 | N/A | 4 | N/A | N/A | 456,609 |
| | Forest Service | 107 | 91,286 | N/A | 0 | N/A | N/A | 91,393 |
| | Other Federal | 130 | 920 | N/A | 0 | N/A | N/A | 1,050 |
| | State | 686 | 45,485 | N/A | 1 | N/A | N/A | 46,172 |
| | Private | 11,438 | 115,362 | N/A | 30 | N/A | N/A | 126,830 |
| | Other | 50 | 34 | N/A | 0 | N/A | N/A | 84 |
| | **Total** | **14,745** | **707,357** | **N/A** | **35** | **N/A** | **N/A** | **722,137** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 25,782 | 900,708 | 159,674 | 40 | 22 | 427 | 1,086,652 |
| | Forest Service | 612 | 99,994 | 17,009 | 0 | 0 | 61 | 117,677 |
| | Other Federal | 709 | 3,823 | 5,940 | 0 | 1 | 1 | 10,473 |
| | State | 9,793 | 71,835 | 17,493 | 5 | 10 | 48 | 99,184 |
| | Private | 188,723 | 314,949 | 105,525 | 246 | 263 | 461 | 610,166 |
| | Other | 1,089 | 590 | 2,400 | 0 | 1 | 3 | 4,083 |
| | **Total** | **226,708** | **1,391,899** | **308,042** | **291** | **297** | **1,000** | **1,928,236** |

**Table 17. Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to all BSUs**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 1.51% | 55.83% | N/A | 0.00% | N/A | N/A | 57.34% |
| | Forest Service | 0.11% | 2.63% | N/A | 0.00% | N/A | N/A | 2.74% |
| | Other Federal | 0.05% | 1.89% | N/A | 0.00% | N/A | N/A | 1.94% |
| | State | 0.67% | 3.83% | N/A | 0.00% | N/A | N/A | 4.51% |
| | Private | 18.43% | 14.91% | N/A | 0.01% | N/A | N/A | 33.35% |
| | Other | 0.07% | 0.05% | N/A | 0.00% | N/A | N/A | 0.13% |
| | **Total** | **20.85%** | **79.15%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |
| 2013 - 2014 | Bureau of Land Management | 3.49% | 40.43% | N/A | 0.00% | N/A | N/A | 43.92% |
| | Forest Service | 0.04% | 0.19% | N/A | 0.00% | N/A | N/A | 0.23% |
| | Other Federal | 0.13% | 0.00% | N/A | 0.00% | N/A | N/A | 0.13% |
| | State | 1.50% | 2.74% | N/A | 0.00% | N/A | N/A | 4.24% |
| | Private | 27.38% | 23.97% | N/A | 0.06% | N/A | N/A | 51.42% |
| | Other | 0.06% | 0.00% | N/A | 0.00% | N/A | N/A | 0.06% |
| | **Total** | **32.59%** | **67.34%** | **N/A** | **0.07%** | **N/A** | **N/A** | **100.00%** |
| 2014 - 2015 | Bureau of Land Management | 2.62% | 60.48% | N/A | 0.00% | N/A | N/A | 63.10% |
| | Forest Service | 0.08% | 0.08% | N/A | 0.00% | N/A | N/A | 0.16% |
| | Other Federal | 0.04% | 0.05% | N/A | 0.00% | N/A | N/A | 0.10% |
| | State | 0.85% | 2.71% | N/A | 0.00% | N/A | N/A | 3.56% |
| | Private | 19.00% | 13.92% | N/A | 0.01% | N/A | N/A | 32.93% |
| | Other | 0.08% | 0.08% | N/A | 0.00% | N/A | N/A | 0.16% |
| | **Total** | **22.67%** | **77.32%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |
| 2015 - 2016 | Bureau of Land Management | 6.04% | 42.08% | N/A | 0.01% | N/A | N/A | 48.13% |
| | Forest Service | 0.08% | 0.05% | N/A | 0.00% | N/A | N/A | 0.13% |
| | Other Federal | 0.06% | 0.00% | N/A | 0.00% | N/A | N/A | 0.06% |
| | State | 1.82% | 1.43% | N/A | 0.00% | N/A | N/A | 3.25% |
| | Private | 32.44% | 15.80% | N/A | 0.02% | N/A | N/A | 48.26% |
| | Other | 0.17% | 0.00% | N/A | 0.00% | N/A | N/A | 0.17% |
| | **Total** | **40.60%** | **59.37%** | **N/A** | **0.03%** | **N/A** | **N/A** | **100.00%** |

**Table 17 (*continued*). Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to all BSUs**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2016 - 2017 | Bureau of Land Management | 0.63% | 23.68% | 27.05% | 0.00% | 0.00% | 0.07% | 51.45% |
| | Forest Service | 0.01% | 0.81% | 2.88% | 0.00% | 0.00% | 0.01% | 3.71% |
| | Other Federal | 0.01% | 0.07% | 1.01% | 0.00% | 0.00% | 0.00% | 1.09% |
| | State | 0.31% | 1.58% | 2.96% | 0.00% | 0.00% | 0.01% | 4.87% |
| | Private | 5.21% | 15.11% | 17.88% | 0.01% | 0.04% | 0.08% | 38.33% |
| | Other | 0.09% | 0.06% | 0.41% | 0.00% | 0.00% | 0.00% | 0.56% |
| | **Total** | **6.27%** | **41.32%** | **52.19%** | **0.01%** | **0.05%** | **0.17%** | **100.00%** |
| 2017 -2018 | Bureau of Land Management | 0.32% | 62.91% | N/A | 0.00% | N/A | N/A | 63.23% |
| | Forest Service | 0.01% | 12.64% | N/A | 0.00% | N/A | N/A | 12.66% |
| | Other Federal | 0.02% | 0.13% | N/A | 0.00% | N/A | N/A | 0.15% |
| | State | 0.10% | 6.30% | N/A | 0.00% | N/A | N/A | 6.39% |
| | Private | 1.58% | 15.98% | N/A | 0.00% | N/A | N/A | 17.56% |
| | Other | 0.01% | 0.00% | N/A | 0.00% | N/A | N/A | 0.01% |
| | **Total** | **2.04%** | **97.95%** | **N/A** | **0.00%** | **N/A** | **N/A** | **100.00%** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 1.34% | 46.71% | 8.28% | 0.00% | 0.00% | 0.02% | 56.35% |
| | Forest Service | 0.03% | 5.19% | 0.88% | 0.00% | 0.00% | 0.00% | 6.10% |
| | Other Federal | 0.04% | 0.20% | 0.31% | 0.00% | 0.00% | 0.00% | 0.54% |
| | State | 0.51% | 3.73% | 0.91% | 0.00% | 0.00% | 0.00% | 5.14% |
| | Private | 9.79% | 16.33% | 5.47% | 0.01% | 0.01% | 0.02% | 31.64% |
| | Other | 0.06% | 0.03% | 0.12% | 0.00% | 0.00% | 0.00% | 0.21% |
| | **Total** | **11.76%** | **72.19%** | **15.98%** | **0.02%** | **0.02%** | **0.05%** | **100.00%** |

**Table 18. Sagebrush Loss Estimates (Acres) by Cause and Surface Management Agency Aggregated to BSUs in the Rocky Mountain Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 930 | 2,983 | N/A | 0 | N/A | N/A | 3,912 |
| | Forest Service | 23 | 147 | N/A | 0 | N/A | N/A | 170 |
| | Other Federal | 21 | 47 | N/A | 0 | N/A | N/A | 68 |
| | State | 701 | 1,016 | N/A | 0 | N/A | N/A | 1,718 |
| | Private | 18,029 | 2,815 | N/A | 0 | N/A | N/A | 20,844 |
| | Other | 37 | 0 | N/A | 0 | N/A | N/A | 37 |
| | **Total** | **19,741** | **7,008** | **N/A** | **0** | **N/A** | **N/A** | **26,749** |
| 2013 - 2014 | Bureau of Land Management | 7,018 | 5,543 | N/A | 1 | N/A | N/A | 12,562 |
| | Forest Service | 28 | 0 | N/A | 0 | N/A | N/A | 28 |
| | Other Federal | 272 | 0 | N/A | 0 | N/A | N/A | 272 |
| | State | 3,203 | 1,036 | N/A | 0 | N/A | N/A | 4,239 |
| | Private | 56,841 | 13,277 | N/A | 6 | N/A | N/A | 70,123 |
| | Other | 26 | 0 | N/A | 0 | N/A | N/A | 26 |
| | **Total** | **67,388** | **19,856** | **N/A** | **7** | **N/A** | **N/A** | **87,250** |
| 2014 - 2015 | Bureau of Land Management | 3,908 | 2,051 | N/A | 0 | N/A | N/A | 5,960 |
| | Forest Service | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| | Other Federal | 59 | 100 | N/A | 0 | N/A | N/A | 159 |
| | State | 1,486 | 238 | N/A | 0 | N/A | N/A | 1,724 |
| | Private | 31,648 | 3,358 | N/A | 10 | N/A | N/A | 35,016 |
| | Other | 20 | 111 | N/A | 0 | N/A | N/A | 131 |
| | **Total** | **37,140** | **5,859** | **N/A** | **10** | **N/A** | **N/A** | **43,010** |
| 2015 - 2016 | Bureau of Land Management | 5,100 | 1,033 | N/A | 10 | N/A | N/A | 6,144 |
| | Forest Service | 21 | 0 | N/A | 0 | N/A | N/A | 21 |
| | Other Federal | 48 | 0 | N/A | 0 | N/A | N/A | 48 |
| | State | 1,596 | 36 | N/A | 0 | N/A | N/A | 1,633 |
| | Private | 26,040 | 3,319 | N/A | 13 | N/A | N/A | 29,372 |
| | Other | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| | **Total** | **32,818** | **4,388** | **N/A** | **23** | **N/A** | **N/A** | **37,230** |

**Table 18 (*continued*). Sagebrush Loss Estimates (Acres) by Cause and Surface Management Agency Aggregated to BSUs in the Rocky Mountain Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2016 - 2017 | Bureau of Land Management | 3,206 | 12,878 | 61,521 | 7 | 17 | 47 | 77,675 |
| | Forest Service | 10 | 0 | 3,985 | 0 | 0 | 0 | 3,995 |
| | Other Federal | 64 | 129 | 1,475 | 0 | 0 | 1 | 1,669 |
| | State | 1,798 | 5,823 | 11,514 | 2 | 10 | 36 | 19,184 |
| | Private | 28,320 | 70,210 | 65,855 | 16 | 235 | 366 | 165,002 |
| | Other | 40 | 0 | 542 | 0 | 0 | 0 | 582 |
| | **Total** | **33,437** | **89,040** | **144,892** | **25** | **263** | **449** | **268,107** |
| 2017 - 2018 | Bureau of Land Management | 1,565 | 27,527 | N/A | 0 | N/A | N/A | 29,092 |
| | Forest Service | 43 | 70 | N/A | 0 | N/A | N/A | 113 |
| | Other Federal | 74 | 28 | N/A | 0 | N/A | N/A | 102 |
| | State | 604 | 6,927 | N/A | 0 | N/A | N/A | 7,531 |
| | Private | 8,918 | 20,573 | N/A | 24 | N/A | N/A | 29,515 |
| | Other | 15 | 31 | N/A | 0 | N/A | N/A | 46 |
| | **Total** | **11,219** | **55,156** | **N/A** | **24** | **N/A** | **N/A** | **66,399** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 21,728 | 52,015 | 61,521 | 19 | 17 | 47 | 135,346 |
| | Forest Service | 142 | 217 | 3,985 | 0 | 0 | 0 | 4,345 |
| | Other Federal | 538 | 305 | 1,475 | 0 | 0 | 1 | 2,319 |
| | State | 9,389 | 15,076 | 11,514 | 2 | 10 | 36 | 36,028 |
| | Private | 169,796 | 113,552 | 65,855 | 69 | 235 | 366 | 349,873 |
| | Other | 149 | 142 | 542 | 0 | 0 | 0 | 834 |
| | **Total** | **201,743** | **181,308** | **144,892** | **90** | **263** | **449** | **528,744** |

**Table 19. Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to BSUs in the Rocky Mountain Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 3.48% | 11.15% | N/A | 0.00% | N/A | N/A | 14.63% |
| | Forest Service | 0.09% | 0.55% | N/A | 0.00% | N/A | N/A | 0.64% |
| | Other Federal | 0.08% | 0.18% | N/A | 0.00% | N/A | N/A | 0.26% |
| | State | 2.62% | 3.80% | N/A | 0.00% | N/A | N/A | 6.42% |
| | Private | 67.40% | 10.52% | N/A | 0.00% | N/A | N/A | 77.92% |
| | Other | 0.14% | 0.00% | N/A | 0.00% | N/A | N/A | 0.14% |
| | **Total** | **73.80%** | **26.20%** | **N/A** | **0.00%** | **N/A** | **N/A** | **100.00%** |
| 2013 - 2014 | Bureau of Land Management | 8.04% | 6.35% | N/A | 0.00% | N/A | N/A | 14.40% |
| | Forest Service | 0.03% | 0.00% | N/A | 0.00% | N/A | N/A | 0.03% |
| | Other Federal | 0.31% | 0.00% | N/A | 0.00% | N/A | N/A | 0.31% |
| | State | 3.67% | 1.19% | N/A | 0.00% | N/A | N/A | 4.86% |
| | Private | 65.15% | 15.22% | N/A | 0.01% | N/A | N/A | 80.37% |
| | Other | 0.03% | 0.00% | N/A | 0.00% | N/A | N/A | 0.03% |
| | **Total** | **77.24%** | **22.76%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |
| 2014 - 2015 | Bureau of Land Management | 9.09% | 4.77% | N/A | 0.00% | N/A | N/A | 13.86% |
| | Forest Service | 0.04% | 0.00% | N/A | 0.00% | N/A | N/A | 0.04% |
| | Other Federal | 0.14% | 0.23% | N/A | 0.00% | N/A | N/A | 0.37% |
| | State | 3.46% | 0.55% | N/A | 0.00% | N/A | N/A | 4.01% |
| | Private | 73.58% | 7.81% | N/A | 0.02% | N/A | N/A | 81.42% |
| | Other | 0.05% | 0.26% | N/A | 0.00% | N/A | N/A | 0.31% |
| | **Total** | **86.35%** | **13.62%** | **N/A** | **0.02%** | **N/A** | **N/A** | **100.00%** |
| 2015 - 2016 | Bureau of Land Management | 13.70% | 2.78% | N/A | 0.03% | N/A | N/A | 16.50% |
| | Forest Service | 0.06% | 0.00% | N/A | 0.00% | N/A | N/A | 0.06% |
| | Other Federal | 0.13% | 0.00% | N/A | 0.00% | N/A | N/A | 0.13% |
| | State | 4.29% | 0.10% | N/A | 0.00% | N/A | N/A | 4.39% |
| | Private | 69.95% | 8.91% | N/A | 0.03% | N/A | N/A | 78.89% |
| | Other | 0.03% | 0.00% | N/A | 0.00% | N/A | N/A | 0.03% |
| | **Total** | **88.15%** | **11.79%** | **N/A** | **0.06%** | **N/A** | **N/A** | **100.00%** |

**Table 19 *(continued)*. Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to BSUs in the Rocky Mountain Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2016 - 2017 | Bureau of Land Management | 1.20% | 4.80% | 22.95% | 0.00% | 0.01% | 0.02% | 28.97% |
| | Forest Service | 0.00% | 0.00% | 1.49% | 0.00% | 0.00% | 0.00% | 1.49% |
| | Other Federal | 0.02% | 0.05% | 0.55% | 0.00% | 0.00% | 0.00% | 0.62% |
| | State | 0.67% | 2.17% | 4.29% | 0.00% | 0.00% | 0.01% | 7.16% |
| | Private | 10.56% | 26.19% | 24.56% | 0.01% | 0.09% | 0.14% | 61.54% |
| | Other | 0.01% | 0.00% | 0.20% | 0.00% | 0.00% | 0.00% | 0.22% |
| | **Total** | **12.47%** | **33.21%** | **54.04%** | **0.01%** | **0.10%** | **0.17%** | **100.00%** |
| 2017 - 2018 | Bureau of Land Management | 2.36% | 41.46% | N/A | 0.00% | N/A | N/A | 43.81% |
| | Forest Service | 0.06% | 0.11% | N/A | 0.00% | N/A | N/A | 0.17% |
| | Other Federal | 0.11% | 0.04% | N/A | 0.00% | N/A | N/A | 0.15% |
| | State | 0.91% | 10.43% | N/A | 0.00% | N/A | N/A | 11.34% |
| | Private | 13.43% | 30.98% | N/A | 0.04% | N/A | N/A | 44.45% |
| | Other | 0.02% | 0.05% | N/A | 0.00% | N/A | N/A | 0.07% |
| | **Total** | **16.90%** | **83.07%** | **N/A** | **0.04%** | **N/A** | **N/A** | **100.00%** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 4.11% | 9.84% | 11.64% | 0.00% | 0.00% | 0.01% | 25.60% |
| | Forest Service | 0.03% | 0.04% | 0.75% | 0.00% | 0.00% | 0.00% | 0.82% |
| | Other Federal | 0.10% | 0.06% | 0.28% | 0.00% | 0.00% | 0.00% | 0.44% |
| | State | 1.78% | 2.85% | 2.18% | 0.00% | 0.00% | 0.01% | 6.81% |
| | Private | 32.11% | 21.48% | 12.45% | 0.01% | 0.04% | 0.07% | 66.17% |
| | Other | 0.03% | 0.03% | 0.10% | 0.00% | 0.00% | 0.00% | 0.16% |
| | **Total** | **38.16%** | **34.29%** | **27.40%** | **0.02%** | **0.05%** | **0.08%** | **100.00%** |

**Table 20. Sagebrush Loss Estimates by Cause and Surface Management Agency Aggregated to BSUs in the Great Basin Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 977 | 67,443 | N/A | 2 | N/A | N/A | 68,422 |
| | Forest Service | 109 | 3,175 | N/A | 0 | N/A | N/A | 3,285 |
| | Other Federal | 44 | 2,340 | N/A | 0 | N/A | N/A | 2,383 |
| | State | 145 | 3,807 | N/A | 0 | N/A | N/A | 3,952 |
| | Private | 5,192 | 15,981 | N/A | 6 | N/A | N/A | 21,179 |
| | Other | 82 | 66 | N/A | 0 | N/A | N/A | 148 |
| | **Total** | **6,549** | **92,811** | **N/A** | **9** | **N/A** | **N/A** | **99,369** |
| 2013 - 2014 | Bureau of Land Management | 511 | 81,723 | N/A | 10 | N/A | N/A | 82,243 |
| | Forest Service | 50 | 415 | N/A | 0 | N/A | N/A | 465 |
| | Other Federal | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| | State | 28 | 4,873 | N/A | 2 | N/A | N/A | 4,904 |
| | Private | 2,252 | 38,482 | N/A | 128 | N/A | N/A | 40,862 |
| | Other | 109 | 0 | N/A | 0 | N/A | N/A | 109 |
| | **Total** | **2,968** | **125,493** | **N/A** | **140** | **N/A** | **N/A** | **128,602** |
| 2014 - 2015 | Bureau of Land Management | 887 | 108,764 | N/A | 2 | N/A | N/A | 109,652 |
| | Forest Service | 135 | 142 | N/A | 0 | N/A | N/A | 277 |
| | Other Federal | 21 | 0 | N/A | 0 | N/A | N/A | 21 |
| | State | 66 | 4,728 | N/A | 0 | N/A | N/A | 4,793 |
| | Private | 3,153 | 22,146 | N/A | 7 | N/A | N/A | 25,306 |
| | Other | 139 | 35 | N/A | 0 | N/A | N/A | 173 |
| | **Total** | **4,400** | **135,813** | **N/A** | **8** | **N/A** | **N/A** | **140,222** |
| 2015 - 2016 | Bureau of Land Management | 373 | 37,087 | N/A | 3 | N/A | N/A | 37,463 |
| | Forest Service | 51 | 46 | N/A | 0 | N/A | N/A | 98 |
| | Other Federal | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| | State | 49 | 1,263 | N/A | 0 | N/A | N/A | 1,312 |
| | Private | 3,345 | 10,589 | N/A | 2 | N/A | N/A | 13,937 |
| | Other | 148 | 425 | N/A | 0 | N/A | N/A | 573 |
| | **Total** | **3,974** | **49,410** | **N/A** | **5** | **N/A** | **N/A** | **53,389** |

**Table 20 (*continued*). Sagebrush Loss Estimates by Cause and Surface Management Agency Aggregated to BSUs in the Great Basin Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2016 - 2017 | Bureau of Land Management | 532 | 126,936 | 98,156 | 1 | 4 | 380 | 226,010 |
| | Forest Service | 60 | 4,784 | 13,018 | 0 | 0 | 61 | 17,924 |
| | Other Federal | 25 | 289 | 4,362 | 0 | 1 | 0 | 4,676 |
| | State | 32 | 3,516 | 5,980 | 0 | 0 | 12 | 9,539 |
| | Private | 2,414 | 18,430 | 39,485 | 25 | 28 | 88 | 60,470 |
| | Other | 484 | 909 | 2,148 | 0 | 1 | 10 | 3,552 |
| | **Total** | **3,548** | **154,863** | **163,149** | **26** | **34** | **551** | **322,171** |
| 2017 - 2018 | Bureau of Land Management | 769 | 426,743 | N/A | 4 | N/A | N/A | 427,516 |
| | Forest Service | 64 | 91,216 | N/A | 0 | N/A | N/A | 91,280 |
| | Other Federal | 56 | 892 | N/A | 0 | N/A | N/A | 948 |
| | State | 82 | 38,557 | N/A | 0 | N/A | N/A | 38,639 |
| | Private | 2,519 | 94,789 | N/A | 6 | N/A | N/A | 97,314 |
| | Other | 35 | 3 | N/A | 0 | N/A | N/A | 38 |
| | **Total** | **3,525** | **652,200** | **N/A** | **10** | **N/A** | **N/A** | **655,735** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 4,049 | 848,695 | 98,156 | 21 | 4 | 380 | 951,306 |
| | Forest Service | 470 | 99,778 | 13,018 | 0 | 0 | 61 | 113,328 |
| | Other Federal | 171 | 3,521 | 4,362 | 0 | 1 | 0 | 8,054 |
| | State | 402 | 56,743 | 5,980 | 2 | 0 | 12 | 63,139 |
| | Private | 18,875 | 200,415 | 39,485 | 175 | 28 | 88 | 259,067 |
| | Other | 997 | 1,437 | 2,148 | 0 | 1 | 10 | 4,594 |
| | **Total** | **24,964** | **1,210,590** | **163,149** | **199** | **34** | **551** | **1,399,488** |

**Table 21. Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to BSUs in the Great Basin Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2012 - 2013 | Bureau of Land Management | 0.98% | 67.87% | N/A | 0.00% | N/A | N/A | 68.86% |
| | Forest Service | 0.11% | 3.20% | N/A | 0.00% | N/A | N/A | 3.31% |
| | Other Federal | 0.04% | 2.35% | N/A | 0.00% | N/A | N/A | 2.40% |
| | State | 0.15% | 3.83% | N/A | 0.00% | N/A | N/A | 3.98% |
| | Private | 5.22% | 16.08% | N/A | 0.01% | N/A | N/A | 21.31% |
| | Other | 0.08% | 0.07% | N/A | 0.00% | N/A | N/A | 0.15% |
| | **Total** | **6.59%** | **93.40%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |
| 2013 - 2014 | Bureau of Land Management | 0.40% | 63.55% | N/A | 0.01% | N/A | N/A | 63.95% |
| | Forest Service | 0.04% | 0.32% | N/A | 0.00% | N/A | N/A | 0.36% |
| | Other Federal | 0.01% | 0.00% | N/A | 0.00% | N/A | N/A | 0.01% |
| | State | 0.02% | 3.79% | N/A | 0.00% | N/A | N/A | 3.81% |
| | Private | 1.75% | 29.92% | N/A | 0.10% | N/A | N/A | 31.77% |
| | Other | 0.08% | 0.00% | N/A | 0.00% | N/A | N/A | 0.08% |
| | **Total** | **2.31%** | **97.58%** | **N/A** | **0.11%** | **N/A** | **N/A** | **100.00%** |
| 2014 - 2015 | Bureau of Land Management | 0.63% | 77.57% | N/A | 0.00% | N/A | N/A | 78.20% |
| | Forest Service | 0.10% | 0.10% | N/A | 0.00% | N/A | N/A | 0.20% |
| | Other Federal | 0.02% | 0.00% | N/A | 0.00% | N/A | N/A | 0.02% |
| | State | 0.05% | 3.37% | N/A | 0.00% | N/A | N/A | 3.42% |
| | Private | 2.25% | 15.79% | N/A | 0.00% | N/A | N/A | 18.05% |
| | Other | 0.10% | 0.02% | N/A | 0.00% | N/A | N/A | 0.12% |
| | **Total** | **3.14%** | **96.86%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |
| 2015 - 2016 | Bureau of Land Management | 0.70% | 69.47% | N/A | 0.01% | N/A | N/A | 70.17% |
| | Forest Service | 0.10% | 0.09% | N/A | 0.00% | N/A | N/A | 0.18% |
| | Other Federal | 0.01% | 0.00% | N/A | 0.00% | N/A | N/A | 0.01% |
| | State | 0.09% | 2.36% | N/A | 0.00% | N/A | N/A | 2.46% |
| | Private | 6.27% | 19.83% | N/A | 0.00% | N/A | N/A | 26.10% |
| | Other | 0.28% | 0.80% | N/A | 0.00% | N/A | N/A | 1.07% |
| | **Total** | **7.44%** | **92.55%** | **N/A** | **0.01%** | **N/A** | **N/A** | **100.00%** |

**Table 21 (*continued*). Sagebrush Loss Estimates as a Percentage of Total Timeframe Loss by Cause and Surface Management Agency Aggregated to BSUs in the Great Basin Region**

| Interval | Surface Management Agency | Cause | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | |
| 2016 - 2017 | Bureau of Land Management | 0.17% | 39.40% | 30.47% | 0.00% | 0.00% | 0.12% | 70.15% |
| | Forest Service | 0.02% | 1.48% | 4.04% | 0.00% | 0.00% | 0.02% | 5.56% |
| | Other Federal | 0.01% | 0.09% | 1.35% | 0.00% | 0.00% | 0.00% | 1.45% |
| | State | 0.01% | 1.09% | 1.86% | 0.00% | 0.00% | 0.00% | 2.96% |
| | Private | 0.75% | 5.72% | 12.26% | 0.01% | 0.01% | 0.03% | 18.77% |
| | Other | 0.15% | 0.28% | 0.67% | 0.00% | 0.00% | 0.00% | 1.10% |
| | **Total** | **1.10%** | **48.07%** | **50.64%** | **0.01%** | **0.01%** | **0.17%** | **100.00%** |
| 2017 - 2018 | Bureau of Land Management | 0.12% | 65.08% | N/A | 0.00% | N/A | N/A | 65.20% |
| | Forest Service | 0.01% | 13.91% | N/A | 0.00% | N/A | N/A | 13.92% |
| | Other Federal | 0.01% | 0.14% | N/A | 0.00% | N/A | N/A | 0.14% |
| | State | 0.01% | 5.88% | N/A | 0.00% | N/A | N/A | 5.89% |
| | Private | 0.38% | 14.46% | N/A | 0.00% | N/A | N/A | 14.84% |
| | Other | 0.01% | 0.00% | N/A | 0.00% | N/A | N/A | 0.01% |
| | **Total** | **0.54%** | **99.46%** | **N/A** | **0.00%** | **N/A** | **N/A** | **100.00%** |
| Cumulative 2012 - 2018 | Bureau of Land Management | 0.29% | 60.64% | 7.01% | 0.00% | 0.00% | 0.03% | 67.98% |
| | Forest Service | 0.03% | 7.13% | 0.93% | 0.00% | 0.00% | 0.00% | 8.10% |
| | Other Federal | 0.01% | 0.25% | 0.31% | 0.00% | 0.00% | 0.00% | 0.58% |
| | State | 0.03% | 4.05% | 0.43% | 0.00% | 0.00% | 0.00% | 4.51% |
| | Private | 1.35% | 14.32% | 2.82% | 0.01% | 0.00% | 0.01% | 18.51% |
| | Other | 0.07% | 0.10% | 0.15% | 0.00% | 0.00% | 0.00% | 0.33% |
| | **Total** | **1.78%** | **86.50%** | **11.66%** | **0.01%** | **0.00%** | **0.04%** | **100.00%** |

## Question 5. How are the BLM and USFS contributing to disturbance?

We further analyzed estimated disturbance footprints in PHMAs/IHMAs by surface management agency and present them at several scales of aggregation. First, we summed the calculations to illustrate the estimated disturbance levels across all 105 BSUs combined by agency type (table 22). Second, we summed BSUs within regions to illustrate the variation in disturbance across the range by agency type (tables 23 and 24). Finally, we present estimates of disturbance for individual BSUs by each BLM state/land use plan and surface management agency in appendices 3 and 4.

Summarizing disturbance in PHMAs/IHMAs for all BSUs illustrates that the majority of disturbance occurs on BLM-managed land (over 46%) followed by privately managed land (approximately 41%). Regionally, the majority of surface disturbance occurs in privately managed PHMAs/IHMAs in the Rocky Mountain Region (over 51%) followed by BLM-managed PHMAs/IHMAs (approximately 39%), whereas the opposite is true in the Great Basin Region, with 55% occurring on BLM-managed PHMAs/IHMAs and 30% on privately managed PHMAs/IHMAs.

Cumulative increase in disturbance is highest within the BLM-managed PHMAs/IHMAs (9,938 acres), followed by privately managed PHMAs/IHMAs (9,177 acres) across all BSUs. Regionally, the Rocky Mountain Region contained the majority of the increase in estimated disturbance (11,907 acres of the total 17,264 acres), and these increases occurred primarily on privately managed and BLM-managed land (5,971 acres and 7,955 acres, respectively). In the Great Basin Region, the estimated increase in disturbance totals approximately 5,357 acres, and the increases are primarily on privately managed and BLM-managed PHMAs/IHMAs (3,206 and 1,984 acres, respectively).

For the percentage of PHMAs/IHMAs disturbed within each surface management entity category, private and other managed lands have just below 1% of their PHMAs/IHMAs disturbed, followed by lands managed by the Forest Service (0.72%), state (0.69%), BLM (0.60%), and lands managed by other federal agencies (0.50%) across all BSUs (table 22). In the Rocky Mountain Region, private and other managed lands have the highest percentage of PHMAs/IHMAs disturbed (0.89% and 0.88%, respectively), followed by the Forest Service, BLM, state, and other federal agencies (0.83%, 0.72%, 0.69%, and 0.62%, respectively) (table 23). In the Great Basin Region, private and other managed lands have the highest percentage of PHMAs/IHMAs disturbed (1.06% and 0.95%, respectively), followed by state, Forest Service, BLM, and other federally managed lands (0.70%, 0.69%, 0.54%, and 0.46%, respectively) (table 24).

Acres presented are rounded to the nearest whole number, while annual acreage changes and percentages are calculated from the raw analysis output data. This may lead to slight discrepancies if calculations are performed using the rounded acres summarized here. As acreages are summarized by additional categories (regions and surface management agency), error is introduced and reported acreages may not match overall acreage summaries.

**Table 22. Disturbance Estimates by Surface Management Agency, Aggregated to All BSUs**

| Year | Disturbance Summary Type | Surface Management Agency | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Bureau of Land Management | Forest Service | Other Federal | State | Private | Other | Total |
| 2015 | Acres of Disturbance on PHMAs/IHMAs | 195,455 | 21,220 | 7,495 | 24,010 | 172,417 | 3,278 | 423,875 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.58% | 0.75% | 0.50% | 0.69% | 0.90% | 0.91% | 0.70% |
| | Percent of Total Disturbance | 46.11% | 5.01% | 1.77% | 5.66% | 40.68% | 0.77% | 100.00% |
| 2016 | Acres of Disturbance on PHMAs/IHMAs | 200,170 | 21,295 | 7,514 | 24,306 | 178,083 | 3,324 | 434,692 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.59% | 0.76% | 0.50% | 0.70% | 0.93% | 0.92% | 0.71% |
| | Percent of Total Disturbance | 46.05% | 4.90% | 1.73% | 5.59% | 40.97% | 0.76% | 100.00% |
| 2017 | Acres of Disturbance on PHMAs/IHMAs | 201,369 | 21,569 | 7,594 | 24,335 | 179,732 | 3,331 | 437,929 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.60% | 0.77% | 0.50% | 0.70% | 0.94% | 0.92% | 0.72% |
| | Percent of Total Disturbance | 45.98% | 4.93% | 1.73% | 5.56% | 41.04% | 0.76% | 100.00% |
| 2018 | Acres of Disturbance on PHMAs/IHMAs | 202,068 | 21,609 | 7,592 | 24,300 | 179,899 | 3,325 | 438,792 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.60% | 0.77% | 0.50% | 0.70% | 0.94% | 0.92% | 0.72% |
| | Percent of Total Disturbance | 46.05% | 4.92% | 1.73% | 5.54% | 41.00% | 0.76% | 100.00% |
| 2019 | Acres of Disturbance on PHMAs/IHMAs | 203,665 | 21,887 | 7,577 | 24,534 | 181,419 | 3,357 | 442,438 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.60% | 0.78% | 0.50% | 0.71% | 0.95% | 0.93% | 0.73% |
| | Percent of Total Disturbance | 46.03% | 4.95% | 1.71% | 5.55% | 41.00% | 0.76% | 100.00% |
| 2020 | Acres of Disturbance on PHMAs/IHMAs | 205,394 | 19,234 | 7,598 | 24,455 | 181,594 | 2,863 | 441,139 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.60% | 0.72% | 0.50% | 0.69% | 0.94% | 0.93% | 0.72% |
| | Percent of Total Disturbance | 46.56% | 4.36% | 1.72% | 5.54% | 41.16% | 0.65% | 100.00% |
| Cumulative Change 2015-2020 | Acres of Disturbance on PHMAs/IHMAs | 9,938 | -1,985 | 103 | 445 | 9,177 | -414 | 17,263 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.02% | -0.03% | 0.00% | 0.00% | 0.04% | 0.02% | 0.02% |

**Table 23. Disturbance Estimates by Surface Management Agency, Aggregated to BSUs in the Rocky Mountain Region**

| Year | Disturbance Summary Type | Surface Management Agency | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Bureau of Land Management | Forest Service | Other Federal | State | Private | Other | Total |
| 2015 | Acres of Disturbance on PHMAs/IHMAs | 82,796 | 6,574 | 2,045 | 16,252 | 113,977 | 900 | 222,544 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.65% | 1.32% | 0.60% | 0.67% | 0.85% | 0.88% | 0.75% |
| | Percent of Total Disturbance | 37.20% | 2.95% | 0.92% | 7.30% | 51.22% | 0.40% | 100.00% |
| 2016 | Acres of Disturbance on PHMAs/IHMAs | 86,015 | 6,589 | 2,058 | 16,515 | 117,530 | 912 | 229,619 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.68% | 1.32% | 0.61% | 0.68% | 0.87% | 0.89% | 0.78% |
| | Percent of Total Disturbance | 37.46% | 2.87% | 0.90% | 7.19% | 51.19% | 0.40% | 100.00% |
| 2017 | Acres of Disturbance on PHMAs/IHMAs | 87,026 | 6,755 | 2,121 | 16,547 | 118,755 | 916 | 232,121 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.69% | 1.35% | 0.62% | 0.69% | 0.88% | 0.89% | 0.79% |
| | Percent of Total Disturbance | 37.49% | 2.91% | 0.91% | 7.13% | 51.16% | 0.39% | 100.00% |
| 2018 | Acres of Disturbance on PHMAs/IHMAs | 87,319 | 6,747 | 2,118 | 16,493 | 118,731 | 910 | 232,319 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.69% | 1.35% | 0.62% | 0.68% | 0.88% | 0.89% | 0.79% |
| | Percent of Total Disturbance | 37.59% | 2.90% | 0.91% | 7.10% | 51.11% | 0.39% | 100.00% |
| 2019 | Acres of Disturbance on PHMAs/IHMAs | 88,346 | 6,813 | 2,104 | 16,637 | 120,046 | 904 | 234,850 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.70% | 1.36% | 0.62% | 0.69% | 0.89% | 0.88% | 0.80% |
| | Percent of Total Disturbance | 37.62% | 2.90% | 0.90% | 7.08% | 51.12% | 0.39% | 100.00% |
| 2020 | Acres of Disturbance on PHMAs/IHMAs | 90,751 | 4,137 | 2,117 | 16,596 | 119,948 | 901 | 234,450 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.72% | 0.83% | 0.62% | 0.69% | 0.89% | 0.88% | 0.80% |
| | Percent of Total Disturbance | 38.71% | 1.76% | 0.90% | 7.08% | 51.16% | 0.38% | 100.00% |
| Cumulative Change 2015-2020 | Acres of Disturbance on PHMAs/IHMAs | 7,955 | -2,436 | 72 | 344 | 5,971 | 1 | 11,906 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.06% | -0.49% | 0.02% | 0.01% | 0.04% | 0.00% | 0.04% |

**Table 24. Disturbance Estimates by Surface Management Agency, Aggregated to BSUs in the Great Basin Region**

| Year | Disturbance Summary Type | Surface Management Agency | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Bureau of Land Management | Forest Service | Other Federal | State | Private | Other | Total |
| 2015 | Acres of Disturbance on PHMAs/IHMAs | 112,659 | 14,646 | 5,450 | 7,758 | 58,440 | 2,378 | 201,332 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.53% | 0.67% | 0.46% | 0.69% | 1.00% | 1.15% | 0.63% |
| | Percent of Total Disturbance | 55.96% | 7.27% | 2.71% | 3.85% | 29.03% | 1.18% | 100.00% |
| 2016 | Acres of Disturbance on PHMAs/IHMAs | 114,155 | 14,706 | 5,456 | 7,791 | 60,552 | 2,412 | 205,073 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.53% | 0.68% | 0.46% | 0.70% | 1.04% | 1.17% | 0.64% |
| | Percent of Total Disturbance | 55.67% | 7.17% | 2.66% | 3.80% | 29.53% | 1.18% | 100.00% |
| 2017 | Acres of Disturbance on PHMAs/IHMAs | 114,342 | 14,813 | 5,473 | 7,788 | 60,976 | 2,415 | 205,808 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.54% | 0.68% | 0.46% | 0.70% | 1.05% | 1.17% | 0.65% |
| | Percent of Total Disturbance | 55.56% | 7.20% | 2.66% | 3.78% | 29.63% | 1.17% | 100.00% |
| 2018 | Acres of Disturbance on PHMAs/IHMAs | 114,749 | 14,861 | 5,473 | 7,807 | 61,167 | 2,415 | 206,474 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.54% | 0.68% | 0.46% | 0.70% | 1.05% | 1.17% | 0.65% |
| | Percent of Total Disturbance | 55.58% | 7.20% | 2.65% | 3.78% | 29.62% | 1.17% | 100.00% |
| 2019 | Acres of Disturbance on PHMAs/IHMAs | 115,320 | 15,074 | 5,473 | 7,897 | 61,373 | 2,452 | 207,589 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.54% | 0.69% | 0.46% | 0.71% | 1.06% | 1.19% | 0.65% |
| | Percent of Total Disturbance | 55.55% | 7.26% | 2.64% | 3.80% | 29.56% | 1.18% | 100.00% |
| 2020 | Acres of Disturbance on PHMAs/IHMAs | 114,643 | 15,097 | 5,481 | 7,859 | 61,646 | 1,963 | 206,689 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.54% | 0.69% | 0.46% | 0.70% | 1.06% | 0.95% | 0.65% |
| | Percent of Total Disturbance | 55.47% | 7.30% | 2.65% | 3.80% | 29.83% | 0.95% | 100.00% |
| Cumulative Change 2015-2020 | Acres of Disturbance on PHMAs/IHMAs | 1,984 | 451 | 31 | 101 | 3,206 | -415 | 5,357 |
| | Percent of PHMAs/IHMAs Disturbed in SMA Category | 0.01% | 0.02% | 0.00% | 0.01% | 0.06% | -0.20% | 0.02% |

# Discussion

## Sagebrush Availability (Questions 1a, 1b, and 4)

From 2012 through 2018, the BLM has estimated the loss of sagebrush in PHMAs/IHMAs by BSUs as well as relative to the historical potential of these areas to support sagebrush communities. These estimates do not include any increases in sagebrush availability resulting from successful restoration or vegetation treatment activities because the BLM is not yet able to aggregate post-action monitoring information of these activities to this scale. As described in the monitoring framework, the BLM continues to advance these capabilities and will incorporate these data into future analyses when available. The Conservation Efforts Database, however, contains over 4,400 records of BLM actions intended to benefit sage-grouse habitat across the range.

The estimated cumulative loss of sagebrush exceeds 1.9 million acres in PHMAs/IHMAs, representing approximately 3% of the estimated sagebrush available at the onset of monitoring. Approximately 76% of areas capable of supporting sagebrush (BpS) within PHMAs/IHMAs remain in sagebrush communities at the end of the monitoring timeframe, down from approximately 79% of areas in such condition at the onset of monitoring. Regionally, sagebrush loss has been unequal, with the Great Basin Region retaining approximately 69% of areas capable of supporting sagebrush communities in sagebrush (a 4.8% loss) compared to approximately 84% in the Rocky Mountain Region (a 1.9% loss). The primary driver of sagebrush loss across all BSUs combined is fire (72% of total loss), with the Great Basin particularly impacted (87% of total loss). Agricultural conversion and impervious surfaces combine to account for approximately 66% of sagebrush loss in the Rocky Mountain Region; however, the acres lost to fire in the last two monitoring intervals (2016–2018) exceed all acres lost to fire in the four previous intervals combined with fire now exceeding impervious surface as the second largest cause of sagebrush loss in the Rocky Mountain Region. This disparity in drivers of sagebrush loss further illustrates that the threats to sagebrush availability vary across the range, but future analyses of the 2019 and 2020 fire data may illustrate an increase in the fire threat in the Rocky Mountain Region.

Appendices 1, 2, and 6 illustrate that many BSUs across the range have experienced dramatic sagebrush loss over the monitoring timeframe, most commonly due to single or repeated fire events. Each state monitoring report (appendices 7–15) details how many habitat adaptive management triggers have been tripped in these BSUs.

Assessing the BLM's contribution to sagebrush loss via these monitoring efforts is difficult at this scale because, of the three factors monitored, only impervious surfaces would reflect BLM discretionary actions (such as road construction and large-scale energy and mining development). Further, as described in the methods and results sections, annual losses to impervious surfaces could not be tracked in these analyses because of the timing of data availability and because existing impervious surfaces may be overrepresented in the data applied to create the 2017 estimates. Despite this potential, these impervious surface data may account for the inability to capture locatable, saleable, and disposable mineral locations in the disturbance estimates (see next section) and therefore, the results of the two monitoring efforts should be used in conjunction when evaluating the impacts of development. Agricultural conversion remains a significant factor of sagebrush loss in the Rocky Mountain Region, primarily on privately managed PHMAs/IHMAs; however, the coarseness of these data may be overrepresenting agricultural conversion on BLM-managed land. Wildfire remains as the largest driver of sagebrush loss, both on and off BLM-managed PHMAs/IHMAs in the Great Basin Region as well as across the range.

These analyses demonstrate that BLM-managed PHMAs/IHMAs represent approximately 56% of all lost sagebrush, followed by privately managed PHMAs/IHMAs at 32%. Regionally, the BLM-managed PHMAs/IHMAs represent 68% of sagebrush lost in the Great Basin Region, compared to 26% in the Rocky Mountain Region.

## Disturbance Intensity (Questions 2a–c and 5)

The BLM has monitored the *estimated* surface disturbance footprint as well as energy and mining density in PHMAs/IHMAs by BSUs as described from 2015 through 2020. The additional habitat management areas identified in each land use plan (General HMAs, Linkage/Connectivity HMAs, Restoration HMAs, Anthro Mountain HMAs, and Other HMAs) are not included in this monitoring effort or the summaries presented above because no BLM management decisions or adaptive management triggers relied on disturbance estimates outside of PHMAs/IHMAs.

The results for questions 2a–c and 5 and appendices 3, 4, and 5 show changes in estimated disturbance footprint area as well as energy and mining density within PHMAs/IHMAs at all scales (rangewide, regionally, and individual BSUs) have remained low (a 0.48% or less increase in area and 0.59 facilities per 640 acres increase in density). Collectively, BLM-managed and private lands contain nearly 88%of the surface disturbance area; however, the total estimated increase of surface disturbance on private lands exceeds that on BLM-managed lands.

The summaries at the regional scale underscore the known uneven distribution of surface disturbance and energy and mining threats to sage-grouse habitat, illustrating that the majority of the initial and increase in disturbed area and density is occurring in the Rocky Mountain Region. Change in disturbance estimates in the Great Basin Region is approximately half that in the Rocky Mountain Region, with change in density estimates being almost zero in both.

The BSU-scale estimates illustrate several cases where disturbance estimates in some BSUs have increased more so than other BSUs; however, no BSU is estimated to exceed the 3% cap as described in each land use plan. The density estimates for BSUs exceeding the 1 per 640 acres occur in states that have acknowledged and responded to this exceedance (northwest Colorado) or that rely on a state-managed density and disturbance information management system for official inventories (Wyoming). Please refer to the respective state monitoring reports (appendices 7–15) for further discussion of disturbance and density cap analyses and specifics on site-scale disturbance cap calculations and authorizations.

These analyses should be interpreted with the recognition that they are coarse estimates of disturbance and density at broad scales. As the BLM has implemented these analyses over the monitoring period, we have recognized the following shortcomings with these analytical approaches and source data:

1. Two-track roads (i.e., noncrowned and ditched) are overrepresented in these estimates.
2. Locatable, salable, and leasable mineral sites are underrepresented in these estimates.
3. Colocation of energy sites is underrepresented in the density estimates.
4. Reclamation/restoration is not currently adequately applied to these estimates due to the lack of consistent data rangewide and across all programs that implement reclamation activities.

Despite these acknowledged analytical limitations, these results support the conclusion that the implementation of BLM land use plan decisions regarding disturbance and density are helping to minimize the change in disturbance and energy and mining density in PHMAs/IHMAs. Individual state monitoring reports (appendices 7–15) outline with more detail and higher accuracy the amount of BLM authorized disturbance within PHMAs/IHMAs.

## Habitat Condition (Question 1c)

This assessment represents a bird's eye view of the status, condition, and general trend of BLM rangelands within Greater Sage-Grouse habitat and outside of habitat from 2013 to 2018. We focus on the condition

of habitats that retain rangeland vegetation. These habitats may have been degraded by fires, management activities, climate variability, or other drivers. Areas that have been physically converted to something else by disturbance (e.g., agriculture conversion, development) are excluded from this analysis (instead, see questions 1a and b, 2a–c, and 5).

Many habitat condition indicators are static or improving across the sage-grouse range, including sagebrush and perennial grass and forb cover and height. However, every state had some rangelands with degraded habitat conditions. Additional context is provided by comparing habitat condition to habitat objectives tables within each state report (appendices 7–15). Note that the available indicators in this report do not always match the habitat objectives table in the plan—they represent a suite of indicators identified as relevant to sage-grouse habitat prior to the completion of the 2015 land use plans (BLM and USFS 2015).

Invasive plants, especially invasive annual grasses, are a threat to habitat condition (Coates et al. 2015). We found that they appear to be increasing within habitats across Greater Sage-Grouse range. This pattern interacts with and may be driven by increasing wildfire (Pyke et al. 2016; Pilliod et al. 2017; Wood et al. 2019). This in turn can cause further changes to rangeland ecosystem health such as soil erosion that further limit recovery of habitat (Le Maitre 2015; Condon and Pyke 2018).

The variability in status and condition of habitats can inform a targeted approach to land use, management, and vegetation treatments focused on sustaining ecological processes within each state and habitat area.

### Populations (Question 3)

Sage-grouse populations are declining in some areas of their range more markedly than in others based on the data used to support adaptive management triggers, per the land use plans (see state monitoring reports). To produce population estimates and trends consistently across the range, the state wildlife agencies, USGS, and universities are working to organize and standardize lek count data and incorporate sampling errors and biases. The methodology and results for population trend estimates for sage-grouse were published in the USGS rangewide population monitoring report (Coates et al. 2021).

## Conclusions



The results presented in this report indicate that threats to Greater Sage-Grouse and their habitat are expanding. These results align with findings from other efforts, such as the USGS sagebrush conservation strategy (Remington et al. 2021), which show that threats to the sagebrush biome are extensive and multifaceted.

Wildfire is by far the greatest driver of habitat loss and should continue to be a focus of conservation efforts across the range, particularly in the Great Basin. Anthropogenic disturbance is also occurring in PHMAs/IHMAs, but at relatively minimal levels (an estimated 0.03% increase over the monitoring period, for a total of approximately 17,000 acres). However, as previously discussed, the rangewide dataset has limitations and may be underestimating disturbance. While there are additional actions that influence Greater Sage-Grouse habitat, such as BLM's oil and gas lease sales in habitat areas, they are not part of the monitoring framework and are not included in this report. Outside of the areas lost during the monitoring period, the trend and condition of the indicators describing habitat characteristics important to Greater Sage-Grouse are stable to improving rangewide, although invasive species are increasing and continue to represent a major threat to habitat conditions. Finally, Greater Sage-Grouse populations are declining in some areas of their range more markedly than in others (see BLM state monitoring reports). These findings align with the USGS rangewide population monitoring report (Coates et al. 2021), which showed troubling population trends.

This report, along with the USGS rangewide population monitoring report and the USGS sagebrush conservation strategy, emphasizes the urgent need to expand ongoing efforts to conserve currently functional habitat and restore currently degraded habitat. Expanding these efforts aligns with Executive Order 14008, which calls for the conservation and restoration of public lands and waters.

Conservation and restoration efforts in Greater Sage-Grouse habitat are not new. As documented in the U.S. Fish and Wildlife Service's Conservation Efforts Database (**www.conservationefforts.org**), over 16 partners across the sagebrush biome have conducted over 6,200 conservation actions, including over 4,400 actions from the BLM since 2015. Yet, these efforts have not kept pace with the threats to the habitat. Our collective efforts in this biome need to be enhanced, expanded, and strengthened, through collaborative, cross-jurisdictional partnerships, with a focus on actions with the highest probabilities of success.

As we share in this collaborative effort, the BLM will continue to implement and monitor the Greater Sage-Grouse habitat conservation measures in the land use plans and collect the data needed to monitor the rangewide and land use plan indicators identified in the monitoring framework and summarized herein. The BLM intends to assemble the next monitoring report in 2025.

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# Appendix 1: Sagebrush Availability Estimates in PHMAs/IHMAs by BSU by BLM State

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Colorado | Meeker/ White River | 46.13% | 45.85% | 45.61% | 45.39% | 45.20% | 43.94% | 43.90% | -0.28% | -0.23% | -0.22% | -0.19% | -1.26% | -0.05% | -2.24% |
| | Middle Park | 70.29% | 70.29% | 70.29% | 70.22% | 70.20% | 68.88% | 68.69% | 0.00% | 0.00% | -0.06% | -0.03% | -1.32% | -0.19% | -1.59% |
| | North Eagle/ South Routt | 58.33% | 58.32% | 58.31% | 58.30% | 58.30% | 57.35% | 57.00% | -0.02% | -0.01% | 0.00% | -0.01% | -0.95% | -0.35% | -1.34% |
| | North Park | 73.94% | 73.94% | 73.94% | 73.90% | 73.88% | 72.48% | 72.46% | 0.00% | 0.00% | -0.04% | -0.02% | -1.40% | -0.02% | -1.48% |
| | Northwest Colorado | 74.56% | 74.39% | 73.25% | 73.16% | 73.10% | 71.57% | 70.08% | -0.17% | -1.14% | -0.09% | -0.06% | -1.52% | -1.49% | -4.48% |
| | Parachute/ Piceance/ Roan | 61.04% | 61.04% | 61.04% | 61.03% | 61.03% | 59.61% | 59.61% | 0.00% | 0.00% | 0.00% | 0.00% | -1.42% | 0.00% | -1.43% |
| Idaho | Idaho Desert Conservation Area - IHMA | 51.25% | 50.68% | 50.65% | 50.56% | 50.55% | 48.62% | 47.27% | -0.57% | -0.03% | -0.09% | -0.01% | -1.93% | -1.35% | -3.99% |
| | Idaho Desert Conservation Area - PHMA | 74.90% | 73.99% | 72.22% | 72.19% | 70.74% | 67.92% | 66.81% | -0.91% | -1.77% | -0.03% | -1.45% | -2.82% | -1.11% | -8.09% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 81.62% | 78.75% | 78.74% | 78.70% | 78.68% | 77.58% | 74.79% | -2.87% | -0.01% | -0.04% | -0.02% | -1.10% | -2.80% | -6.83% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 84.15% | 84.09% | 84.07% | 84.02% | 83.85% | 83.28% | 79.03% | -0.06% | -0.02% | -0.05% | -0.17% | -0.56% | -4.25% | -5.12% |
| | Idaho Southern Conservation Area - IHMA | 50.07% | 48.99% | 48.94% | 48.85% | 48.81% | 48.42% | 45.47% | -1.07% | -0.05% | -0.09% | -0.03% | -0.39% | -2.96% | -4.60% |
| | Idaho Southern Conservation Area - PHMA | 61.35% | 60.97% | 60.96% | 60.95% | 60.94% | 60.49% | 59.29% | -0.37% | -0.01% | -0.01% | 0.00% | -0.46% | -1.20% | -2.05% |

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Idaho** *(continued)* | Idaho West Owyhee Conservation Area - IHMA | 63.66% | 63.19% | 63.17% | 48.63% | 48.62% | 48.34% | 48.32% | -0.47% | -0.02% | -14.54% | -0.02% | -0.28% | -0.01% | -15.34% |
| | Idaho West Owyhee Conservation Area - PHMA | 83.89% | 83.80% | 83.78% | 82.53% | 82.53% | 82.02% | 80.06% | -0.09% | -0.02% | -1.24% | 0.00% | -0.51% | -1.96% | -3.83% |
| **Montana** | Dakotas | 88.29% | 88.09% | 87.96% | 87.80% | 87.71% | 86.87% | 86.81% | -0.20% | -0.13% | -0.16% | -0.09% | -0.84% | -0.06% | -1.48% |
| | Northern Montana | 90.14% | 90.03% | 89.59% | 89.21% | 88.84% | 87.99% | 87.88% | -0.11% | -0.44% | -0.38% | -0.37% | -0.84% | -0.11% | -2.26% |
| | Powder River Basin | 96.21% | 96.14% | 95.97% | 93.48% | 93.36% | 62.49% | 62.35% | -0.07% | -0.18% | -2.49% | -0.12% | -30.86% | -0.14% | -33.86% |
| | SW Montana Conservation Area | 74.51% | 74.51% | 74.51% | 74.51% | 74.51% | 74.14% | 74.14% | 0.00% | 0.00% | 0.00% | 0.00% | -0.37% | 0.00% | -0.38% |
| | Wyoming Basin | 76.63% | 76.59% | 76.36% | 76.20% | 76.10% | 75.37% | 75.26% | -0.04% | -0.23% | -0.15% | -0.11% | -0.72% | -0.12% | -1.38% |
| | Yellowstone Watershed | 86.43% | 86.20% | 85.05% | 84.59% | 84.22% | 83.16% | 83.03% | -0.23% | -1.14% | -0.46% | -0.37% | -1.05% | -0.14% | -3.40% |
| **Nevada/ California** | Black Rock | 80.86% | 80.85% | 80.85% | 80.85% | 80.85% | 79.57% | 79.57% | 0.00% | 0.00% | 0.00% | 0.00% | -1.28% | 0.00% | -1.29% |
| | Butte/Buck/ White Pine | 77.86% | 77.85% | 77.85% | 77.85% | 77.85% | 77.21% | 77.19% | 0.00% | 0.00% | 0.00% | 0.00% | -0.64% | -0.01% | -0.66% |
| | Central Elko | 65.31% | 65.29% | 65.29% | 65.28% | 65.23% | 64.44% | 60.36% | -0.02% | 0.00% | 0.00% | -0.06% | -0.79% | -4.08% | -4.95% |
| | Central Great Basin | 71.51% | 71.48% | 71.48% | 71.47% | 71.46% | 70.67% | 70.65% | -0.03% | 0.00% | -0.01% | 0.00% | -0.80% | -0.01% | -0.86% |
| | East High Desert | 77.07% | 77.07% | 76.27% | 76.27% | 76.18% | 75.46% | 75.32% | 0.00% | -0.79% | 0.00% | -0.09% | -0.72% | -0.14% | -1.74% |
| | Lassen/ South Washoe | 52.02% | 51.88% | 51.88% | 51.86% | 51.23% | 48.57% | 48.56% | -0.14% | -0.01% | -0.02% | -0.62% | -2.67% | 0.00% | -3.46% |

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Nevada/ California** *(continued)* | Likely Tables PMU | 79.65% | 79.64% | 79.61% | 79.61% | 79.61% | 77.44% | 77.44% | 0.00% | -0.03% | 0.00% | 0.00% | -2.17% | 0.00% | -2.21% |
| | Lone Willow | 43.34% | 43.25% | 43.25% | 43.25% | 43.25% | 43.03% | 43.03% | -0.09% | 0.00% | 0.00% | 0.00% | -0.21% | 0.00% | -0.31% |
| | Monitor | 88.15% | 88.15% | 88.15% | 88.14% | 88.14% | 87.51% | 87.51% | 0.00% | 0.00% | 0.00% | 0.00% | -0.63% | 0.00% | -0.64% |
| | Northeast Elko | 46.89% | 46.89% | 46.89% | 46.88% | 46.88% | 45.29% | 43.90% | 0.00% | 0.00% | -0.01% | 0.00% | -1.59% | -1.39% | -2.99% |
| | Northwest Great Basin (NV) | 80.90% | 80.84% | 80.84% | 80.83% | 80.82% | 80.50% | 80.50% | -0.06% | -0.01% | -0.01% | 0.00% | -0.32% | 0.00% | -0.40% |
| | Northwest Interior | 61.05% | 61.05% | 61.05% | 61.04% | 60.92% | 60.57% | 60.37% | 0.00% | 0.00% | -0.01% | -0.13% | -0.35% | -0.19% | -0.68% |
| | Owyhee | 63.34% | 63.13% | 63.12% | 63.11% | 62.88% | 61.16% | 45.51% | -0.21% | 0.00% | -0.01% | -0.23% | -1.72% | -15.66% | -17.83% |
| | Pueblo Range | 67.03% | 66.99% | 66.99% | 66.99% | 66.99% | 66.81% | 66.80% | -0.04% | 0.00% | 0.00% | 0.00% | -0.18% | -0.01% | -0.23% |
| | Ruby | 62.97% | 62.66% | 62.61% | 62.60% | 62.60% | 61.44% | 60.88% | -0.30% | -0.05% | -0.01% | 0.00% | -1.16% | -0.57% | -2.09% |
| | Smith/Reese | 82.47% | 82.44% | 82.43% | 82.25% | 82.21% | 79.16% | 79.15% | -0.03% | 0.00% | -0.18% | -0.04% | -3.05% | -0.01% | -3.32% |
| | Southeastern Nevada | 76.16% | 76.16% | 76.16% | 76.15% | 76.12% | 75.59% | 75.59% | 0.00% | 0.00% | -0.01% | -0.02% | -0.53% | 0.00% | -0.57% |
| | Western Pershing | 77.39% | 77.39% | 77.39% | 77.39% | 77.39% | 77.36% | 77.36% | 0.00% | 0.00% | 0.00% | 0.00% | -0.03% | 0.00% | -0.03% |
| **Oregon** | Baker | 72.03% | 71.95% | 71.47% | 71.42% | 71.31% | 69.63% | 69.60% | -0.08% | -0.48% | -0.05% | -0.11% | -1.69% | -0.03% | -2.44% |
| | Beatys | 88.28% | 88.17% | 88.17% | 88.16% | 88.16% | 87.27% | 87.26% | -0.11% | 0.00% | 0.00% | 0.00% | -0.90% | -0.01% | -1.02% |
| | Brothers/ N Wagontire | 86.47% | 86.47% | 86.42% | 86.42% | 86.42% | 84.67% | 84.67% | 0.00% | -0.05% | 0.00% | 0.00% | -1.75% | 0.00% | -1.80% |
| | Bully Creek | 67.42% | 67.33% | 66.34% | 56.78% | 56.72% | 55.80% | 55.73% | -0.09% | -0.99% | -9.56% | -0.06% | -0.92% | -0.08% | -11.69% |
| | Burns | 50.55% | 49.95% | 49.95% | 49.95% | 49.94% | 48.90% | 48.89% | -0.60% | 0.00% | 0.00% | 0.00% | -1.05% | 0.00% | -1.66% |
| | Cow Lakes | 71.41% | 71.28% | 71.26% | 68.25% | 68.23% | 66.41% | 66.38% | -0.13% | -0.02% | -3.01% | -0.02% | -1.82% | -0.03% | -5.03% |
| | Cow Valley | 75.80% | 75.51% | 72.87% | 71.95% | 71.91% | 70.44% | 70.43% | -0.29% | -2.64% | -0.92% | -0.04% | -1.46% | -0.02% | -5.38% |

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oregon** *(continued)* | Crowley | 84.26% | 83.75% | 67.76% | 67.74% | 64.85% | 63.75% | 63.74% | -0.52% | -15.99% | -0.02% | -2.89% | -1.10% | -0.01% | -20.52% |
| | Drewsey | 55.31% | 55.29% | 54.83% | 54.67% | 54.66% | 53.70% | 53.69% | -0.02% | -0.46% | -0.16% | -0.01% | -0.96% | -0.01% | -1.61% |
| | Dry Valley/ Jack Mountain | 62.71% | 62.69% | 62.69% | 62.69% | 62.69% | 61.82% | 61.71% | -0.01% | 0.00% | 0.00% | 0.00% | -0.87% | -0.11% | -0.99% |
| | Folly Farm/ Saddle Butte | 45.93% | 45.86% | 44.55% | 44.55% | 44.47% | 43.62% | 43.62% | -0.07% | -1.31% | 0.00% | -0.08% | -0.85% | 0.00% | -2.31% |
| | Louse Canyon | 68.32% | 67.18% | 67.18% | 67.18% | 67.18% | 66.26% | 66.17% | -1.14% | 0.00% | 0.00% | 0.00% | -0.92% | -0.09% | -2.16% |
| | Paulina/12 Mile/Misery Flat | 72.61% | 72.60% | 72.60% | 72.53% | 72.42% | 71.21% | 71.20% | -0.01% | 0.00% | -0.08% | -0.10% | -1.22% | 0.00% | -1.41% |
| | Picture Rock | 61.34% | 61.32% | 61.31% | 61.31% | 61.31% | 55.92% | 55.92% | -0.02% | -0.01% | 0.00% | 0.00% | -5.38% | 0.00% | -5.41% |
| | Pueblos/ S Steens | 66.18% | 66.18% | 64.56% | 64.56% | 64.56% | 63.87% | 63.87% | 0.00% | -1.62% | 0.00% | -0.01% | -0.68% | 0.00% | -2.31% |
| | Soldier Creek | 82.66% | 80.96% | 80.96% | 80.22% | 80.21% | 79.17% | 78.93% | -1.70% | 0.00% | -0.74% | -0.01% | -1.04% | -0.24% | -3.73% |
| | Steens | 46.93% | 46.93% | 45.03% | 45.03% | 45.03% | 44.38% | 44.38% | 0.00% | -1.89% | 0.00% | 0.00% | -0.65% | 0.00% | -2.55% |
| | Trout Creeks | 30.59% | 30.59% | 30.59% | 30.59% | 30.58% | 30.09% | 30.07% | 0.00% | 0.00% | 0.00% | -0.01% | -0.49% | -0.02% | -0.52% |
| | Tucker Hill | 58.20% | 58.12% | 58.12% | 58.08% | 58.08% | 57.30% | 57.30% | -0.08% | 0.00% | -0.04% | 0.00% | -0.77% | 0.00% | -0.90% |
| | Warners | 78.57% | 78.38% | 78.38% | 78.38% | 78.38% | 77.33% | 77.33% | -0.18% | 0.00% | 0.00% | 0.00% | -1.05% | 0.00% | -1.23% |
| **Utah** | Bald Hills | 48.49% | 48.34% | 48.34% | 48.34% | 48.33% | 47.81% | 47.75% | -0.14% | 0.00% | 0.00% | 0.00% | -0.52% | -0.07% | -0.74% |
| | Box Elder | 59.99% | 59.33% | 59.31% | 59.30% | 58.74% | 57.65% | 55.15% | -0.66% | -0.02% | 0.00% | -0.56% | -1.09% | -2.50% | -4.84% |
| | Carbon | 38.22% | 38.22% | 38.22% | 38.22% | 38.22% | 36.95% | 36.94% | 0.00% | 0.00% | 0.00% | 0.00% | -1.27% | 0.00% | -1.27% |
| | Emery | 31.31% | 31.31% | 31.31% | 31.31% | 31.30% | 30.70% | 30.70% | 0.00% | 0.00% | 0.00% | -0.01% | -0.60% | 0.00% | -0.61% |
| | Hamlin Valley | 62.15% | 62.15% | 62.15% | 62.15% | 62.15% | 61.62% | 61.61% | 0.00% | 0.00% | 0.00% | 0.00% | -0.54% | -0.01% | -0.55% |
| | Ibapah | 63.36% | 63.36% | 63.36% | 63.36% | 63.36% | 63.07% | 63.05% | 0.00% | 0.00% | 0.00% | 0.00% | -0.29% | -0.02% | -0.31% |
| | Panguitch | 32.25% | 32.25% | 32.24% | 32.24% | 32.24% | 31.18% | 31.18% | 0.00% | 0.00% | 0.00% | 0.00% | -1.06% | 0.00% | -1.07% |

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Utah** *(continued)* | Parker Mtn | 44.69% | 44.69% | 44.69% | 44.69% | 44.49% | 43.99% | 43.95% | 0.00% | 0.00% | 0.00% | -0.19% | -0.51% | -0.03% | -0.74% |
| | Raft River | 50.70% | 50.59% | 50.59% | 50.58% | 50.58% | 49.70% | 49.56% | -0.11% | 0.00% | -0.01% | 0.00% | -0.88% | -0.14% | -1.14% |
| | Rich County | 65.93% | 65.91% | 65.91% | 65.90% | 65.89% | 65.34% | 64.53% | -0.02% | 0.00% | -0.01% | -0.01% | -0.55% | -0.81% | -1.40% |
| | Sheeprocks | 46.61% | 46.54% | 46.26% | 46.25% | 46.23% | 45.52% | 45.44% | -0.07% | -0.28% | -0.01% | -0.02% | -0.71% | -0.09% | -1.17% |
| | Strawberry | 49.72% | 49.72% | 49.72% | 49.70% | 49.70% | 48.29% | 45.77% | 0.00% | 0.00% | -0.02% | 0.00% | -1.41% | -2.52% | -3.95% |
| | Uintah-Diamond Mtn | 44.23% | 44.19% | 44.15% | 44.15% | 44.15% | 43.52% | 43.18% | -0.04% | -0.04% | 0.00% | 0.00% | -0.63% | -0.33% | -1.05% |
| **Wyoming** | Bear River | 89.80% | 89.79% | 89.79% | 89.79% | 89.69% | 89.24% | 65.90% | 0.00% | 0.00% | 0.00% | -0.10% | -0.44% | -23.35% | -23.90% |
| | Blacks Fork | 73.16% | 73.16% | 73.16% | 73.16% | 73.16% | 72.50% | 72.50% | 0.00% | 0.00% | 0.00% | 0.00% | -0.66% | 0.00% | -0.66% |
| | Buffalo | 84.04% | 83.94% | 83.94% | 83.94% | 83.94% | 83.27% | 83.24% | -0.09% | 0.00% | 0.00% | 0.00% | -0.67% | -0.03% | -0.80% |
| | Buffalo Connectivity | 94.43% | 94.27% | 94.26% | 94.26% | 94.16% | 80.88% | 80.81% | -0.16% | -0.01% | 0.00% | -0.10% | -13.28% | -0.07% | -13.62% |
| | Continental Divide | 88.30% | 88.30% | 88.30% | 88.30% | 88.30% | 87.88% | 87.88% | 0.00% | 0.00% | 0.00% | 0.00% | -0.42% | 0.00% | -0.42% |
| | Daniel | 67.51% | 67.51% | 67.51% | 67.51% | 67.51% | 66.90% | 66.90% | 0.00% | 0.00% | 0.00% | 0.00% | -0.61% | 0.00% | -0.62% |
| | Douglas | 88.84% | 88.37% | 88.36% | 88.34% | 87.22% | 86.63% | 86.62% | -0.47% | -0.02% | -0.01% | -1.13% | -0.59% | 0.00% | -2.22% |
| | Elk Basin East | 80.79% | 80.79% | 80.79% | 80.79% | 80.79% | 80.46% | 80.46% | 0.00% | 0.00% | 0.00% | 0.00% | -0.33% | 0.00% | -0.33% |
| | Elk Basin West | 96.03% | 96.03% | 95.84% | 95.84% | 95.83% | 94.63% | 94.63% | 0.00% | -0.19% | 0.00% | 0.00% | -1.20% | 0.00% | -1.40% |
| | Fontenelle | 77.93% | 77.93% | 77.93% | 77.93% | 77.93% | 77.17% | 77.16% | 0.00% | 0.00% | 0.00% | 0.00% | -0.76% | 0.00% | -0.77% |
| | Grass Creek | 77.41% | 77.40% | 77.40% | 77.40% | 77.40% | 77.05% | 77.05% | 0.00% | 0.00% | 0.00% | 0.00% | -0.35% | 0.00% | -0.35% |
| | Greater South Pass | 78.88% | 78.87% | 78.87% | 78.86% | 78.85% | 78.39% | 78.38% | -0.02% | 0.00% | -0.01% | -0.01% | -0.47% | 0.00% | -0.50% |
| | Hanna | 84.30% | 84.29% | 84.29% | 84.29% | 84.29% | 83.61% | 83.60% | 0.00% | 0.00% | 0.00% | 0.00% | -0.68% | -0.01% | -0.70% |
| | Heart Mountain | 78.67% | 78.67% | 78.66% | 78.66% | 78.66% | 78.37% | 78.37% | -0.01% | 0.00% | -0.01% | 0.00% | -0.29% | 0.00% | -0.30% |

| State | BSU ID | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2012 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2013 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2014 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2015 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2016 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2017 | Percentage of PHMAs/ IHMAs within BSUs that is EVT in 2018 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2013 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2013 to 2014 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2014 to 2015 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2015 to 2016 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2016 to 2017 | Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2017 to 2018 | Cumulative Change in Percentage of PHMAs/ IHMAs within BSUs that is EVT from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wyoming** *(continued)* | Hyattville | 70.97% | 70.95% | 70.81% | 70.79% | 70.78% | 70.07% | 68.56% | -0.01% | -0.15% | -0.01% | -0.01% | -0.71% | -1.51% | -2.41% |
| | Jackson | 52.66% | 52.61% | 52.61% | 52.61% | 52.60% | 51.64% | 51.64% | -0.06% | 0.00% | 0.00% | 0.00% | -0.96% | 0.00% | -1.02% |
| | Little Mountain | 73.63% | 73.45% | 73.45% | 73.45% | 73.44% | 72.80% | 72.79% | -0.18% | 0.00% | 0.00% | 0.00% | -0.65% | 0.00% | -0.84% |
| | Natrona | 82.57% | 82.51% | 82.50% | 82.50% | 82.48% | 81.98% | 81.96% | -0.06% | 0.00% | -0.01% | -0.01% | -0.50% | -0.02% | -0.61% |
| | Newcastle | 87.11% | 86.90% | 86.87% | 86.84% | 86.78% | 85.78% | 85.77% | -0.21% | -0.03% | -0.03% | -0.06% | -1.00% | 0.00% | -1.34% |
| | North Gillete Connectivity | 84.70% | 84.19% | 84.18% | 84.09% | 83.66% | 83.15% | 82.99% | -0.51% | -0.01% | -0.09% | -0.42% | -0.51% | -0.16% | -1.72% |
| | North Gillette | 91.08% | 91.00% | 90.98% | 90.97% | 90.09% | 89.20% | 89.00% | -0.07% | -0.02% | -0.02% | -0.87% | -0.89% | -0.21% | -2.08% |
| | North Glenrock | 83.47% | 83.25% | 83.24% | 83.24% | 83.24% | 82.59% | 82.58% | -0.22% | 0.00% | 0.00% | 0.00% | -0.65% | -0.02% | -0.89% |
| | North Laramie | 90.07% | 90.07% | 90.07% | 90.07% | 90.07% | 89.83% | 89.83% | 0.00% | 0.00% | 0.00% | 0.00% | -0.25% | 0.00% | -0.25% |
| | Oregon Basin | 71.83% | 71.82% | 71.82% | 71.81% | 71.78% | 71.40% | 71.15% | -0.01% | 0.00% | -0.01% | -0.03% | -0.38% | -0.25% | -0.68% |
| | Powder | 68.20% | 68.20% | 68.20% | 68.20% | 68.20% | 68.15% | 68.15% | 0.00% | 0.00% | 0.00% | 0.00% | -0.05% | 0.00% | -0.05% |
| | Sage | 68.03% | 68.03% | 68.03% | 68.03% | 68.03% | 67.44% | 67.43% | 0.00% | 0.00% | 0.00% | 0.00% | -0.59% | 0.00% | -0.60% |
| | Salt Wells | 77.75% | 77.75% | 77.75% | 77.36% | 77.36% | 77.00% | 74.71% | 0.00% | 0.00% | -0.39% | 0.00% | -0.36% | -2.29% | -3.04% |
| | Seedskadee | 63.48% | 63.48% | 63.48% | 63.48% | 63.48% | 63.27% | 63.27% | 0.00% | 0.00% | 0.00% | 0.00% | -0.21% | 0.00% | -0.21% |
| | Shell | 73.06% | 72.63% | 72.63% | 72.63% | 72.62% | 72.43% | 72.43% | -0.43% | 0.00% | 0.00% | 0.00% | -0.19% | 0.00% | -0.63% |
| | South Rawlins | 71.76% | 71.76% | 71.76% | 71.75% | 71.75% | 71.22% | 71.16% | 0.00% | 0.00% | -0.01% | 0.00% | -0.53% | -0.05% | -0.60% |
| | Thermopolis | 50.42% | 50.42% | 50.42% | 50.41% | 50.41% | 49.95% | 49.95% | 0.00% | 0.00% | 0.00% | 0.00% | -0.47% | 0.00% | -0.47% |
| | Thunder Basin | 85.38% | 85.28% | 85.24% | 85.12% | 84.83% | 83.97% | 83.96% | -0.10% | -0.04% | -0.12% | -0.29% | -0.86% | -0.01% | -1.42% |
| | Uinta | 74.76% | 74.76% | 74.74% | 74.74% | 74.74% | 74.20% | 74.20% | 0.00% | -0.01% | 0.00% | 0.00% | -0.54% | 0.00% | -0.56% |
| | Washakie | 67.76% | 67.61% | 67.61% | 67.60% | 67.59% | 66.96% | 65.73% | -0.15% | 0.00% | 0.00% | -0.01% | -0.63% | -1.23% | -2.03% |

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# Appendix 2: Sagebrush Availability Relative to Potential Estimates by BSU by BLM State

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Colorado | Meeker/ White River | 50.14% | 49.84% | 49.58% | 49.34% | 49.14% | 47.76% | 47.71% | -0.31% | -0.25% | -0.24% | -0.21% | -1.37% | -0.05% | -2.43% |
| | Middle Park | 83.13% | 83.13% | 83.13% | 83.06% | 83.03% | 81.47% | 81.25% | 0.00% | 0.00% | -0.07% | -0.03% | -1.56% | -0.22% | -1.89% |
| | North Eagle/ South Routt | 73.73% | 73.70% | 73.69% | 73.69% | 73.68% | 72.48% | 72.04% | -0.02% | -0.01% | 0.00% | -0.01% | -1.20% | -0.44% | -1.69% |
| | North Park | 84.69% | 84.69% | 84.69% | 84.64% | 84.62% | 83.01% | 82.99% | 0.00% | 0.00% | -0.05% | -0.02% | -1.60% | -0.02% | -1.70% |
| | Northwest Colorado | 77.59% | 77.41% | 76.22% | 76.13% | 76.06% | 74.48% | 72.93% | -0.18% | -1.19% | -0.10% | -0.06% | -1.59% | -1.55% | -4.66% |
| | Parachute/ Piceance/ Roan | 74.35% | 74.35% | 74.35% | 74.35% | 74.35% | 72.62% | 72.61% | 0.00% | 0.00% | 0.00% | 0.00% | -1.73% | 0.00% | -1.74% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Idaho | Idaho Desert Conservation Area - IHMA | 52.01% | 51.43% | 51.40% | 51.31% | 51.30% | 49.34% | 47.97% | -0.58% | -0.03% | -0.09% | -0.01% | -1.96% | -1.37% | -4.05% |
| | Idaho Desert Conservation Area - PHMA | 76.97% | 76.04% | 74.22% | 74.18% | 72.70% | 69.80% | 68.66% | -0.93% | -1.82% | -0.03% | -1.49% | -2.90% | -1.14% | -8.31% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 88.58% | 85.47% | 85.46% | 85.42% | 85.40% | 84.20% | 81.17% | -3.11% | -0.01% | -0.04% | -0.02% | -1.19% | -3.04% | -7.41% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 88.91% | 88.84% | 88.82% | 88.77% | 88.59% | 87.99% | 83.50% | -0.07% | -0.02% | -0.05% | -0.18% | -0.60% | -4.49% | -5.41% |
| | Idaho Southern Conservation Area - IHMA | 54.92% | 53.74% | 53.68% | 53.58% | 53.54% | 53.12% | 49.87% | -1.18% | -0.06% | -0.10% | -0.04% | -0.43% | -3.24% | -5.05% |
| | Idaho Southern Conservation Area - PHMA | 64.75% | 64.35% | 64.35% | 64.33% | 64.33% | 63.84% | 62.58% | -0.39% | -0.01% | -0.02% | 0.00% | -0.48% | -1.26% | -2.17% |
| | Idaho West Owyhee Conservation Area - IHMA | 72.12% | 71.59% | 71.56% | 55.09% | 55.08% | 54.76% | 54.75% | -0.53% | -0.02% | -16.47% | -0.02% | -0.32% | -0.01% | -17.37% |
| | Idaho West Owyhee Conservation Area - PHMA | 87.62% | 87.52% | 87.50% | 86.20% | 86.20% | 85.67% | 83.62% | -0.10% | -0.02% | -1.30% | 0.00% | -0.53% | -2.04% | -4.00% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montana | Dakotas | 90.12% | 89.91% | 89.78% | 89.62% | 89.52% | 88.67% | 88.60% | -0.21% | -0.13% | -0.17% | -0.09% | -0.86% | -0.06% | -1.51% |
| | Northern Montana | 92.33% | 92.22% | 91.78% | 91.39% | 91.00% | 90.14% | 90.02% | -0.11% | -0.45% | -0.39% | -0.38% | -0.86% | -0.12% | -2.31% |
| | Powder River Basin | 96.50% | 96.43% | 96.25% | 93.75% | 93.64% | 62.68% | 62.54% | -0.07% | -0.18% | -2.50% | -0.12% | -30.96% | -0.14% | -33.96% |
| | SW Montana Conservation Area | 90.68% | 90.68% | 90.67% | 90.67% | 90.67% | 90.22% | 90.22% | 0.00% | 0.00% | 0.00% | 0.00% | -0.45% | 0.00% | -0.46% |
| | Wyoming Basin | 83.24% | 83.19% | 82.94% | 82.77% | 82.66% | 81.87% | 81.74% | -0.05% | -0.25% | -0.16% | -0.12% | -0.79% | -0.13% | -1.49% |
| | Yellowstone Watershed | 87.79% | 87.56% | 86.40% | 85.93% | 85.55% | 84.48% | 84.34% | -0.23% | -1.16% | -0.47% | -0.38% | -1.07% | -0.14% | -3.45% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nevada/ California | Black Rock | 87.73% | 87.73% | 87.73% | 87.73% | 87.73% | 86.34% | 86.34% | 0.00% | 0.00% | 0.00% | 0.00% | -1.39% | 0.00% | -1.40% |
| | Butte/Buck/ White Pine | 83.98% | 83.98% | 83.98% | 83.98% | 83.97% | 83.28% | 83.27% | 0.00% | 0.00% | 0.00% | 0.00% | -0.69% | -0.01% | -0.71% |
| | Central Elko | 71.73% | 71.70% | 71.70% | 71.70% | 71.63% | 70.77% | 66.29% | -0.03% | 0.00% | 0.00% | -0.06% | -0.86% | -4.48% | -5.44% |
| | Central Great Basin | 77.69% | 77.66% | 77.65% | 77.64% | 77.64% | 76.77% | 76.76% | -0.03% | 0.00% | -0.01% | 0.00% | -0.87% | -0.02% | -0.93% |
| | East High Desert | 81.99% | 81.99% | 81.15% | 81.15% | 81.05% | 80.29% | 80.14% | 0.00% | -0.84% | 0.00% | -0.10% | -0.76% | -0.15% | -1.85% |
| | Lassen/ South Washoe | 56.34% | 56.19% | 56.18% | 56.16% | 55.48% | 52.59% | 52.59% | -0.15% | -0.01% | -0.02% | -0.68% | -2.89% | 0.00% | -3.75% |
| | Likely Tables PMU | 92.95% | 92.94% | 92.91% | 92.90% | 92.90% | 90.38% | 90.37% | -0.01% | -0.04% | -0.01% | 0.00% | -2.53% | 0.00% | -2.58% |
| | Lone Willow | 47.16% | 47.06% | 47.06% | 47.06% | 47.06% | 46.83% | 46.82% | -0.10% | 0.00% | 0.00% | 0.00% | -0.23% | -0.01% | -0.34% |
| | Monitor | 90.69% | 90.68% | 90.68% | 90.68% | 90.68% | 90.03% | 90.03% | 0.00% | 0.00% | 0.00% | 0.00% | -0.65% | 0.00% | -0.66% |
| | Northeast Elko | 49.27% | 49.27% | 49.26% | 49.26% | 49.26% | 47.59% | 46.12% | 0.00% | 0.00% | -0.01% | 0.00% | -1.67% | -1.46% | -3.15% |
| | Northwest Great Basin (NV) | 86.65% | 86.59% | 86.58% | 86.58% | 86.57% | 86.22% | 86.22% | -0.06% | -0.01% | -0.01% | 0.00% | -0.35% | 0.00% | -0.43% |
| | Northwest Interior | 70.91% | 70.91% | 70.91% | 70.91% | 70.76% | 70.35% | 70.13% | 0.00% | 0.00% | -0.01% | -0.15% | -0.41% | -0.22% | -0.79% |
| | Owyhee | 68.76% | 68.54% | 68.53% | 68.52% | 68.27% | 66.40% | 49.41% | -0.23% | 0.00% | -0.01% | -0.25% | -1.87% | -17.00% | -19.36% |
| | Pueblo Range | 81.06% | 81.00% | 81.00% | 81.00% | 81.00% | 80.78% | 80.78% | -0.05% | 0.00% | 0.00% | 0.00% | -0.22% | -0.01% | -0.28% |
| | Ruby | 71.05% | 70.71% | 70.65% | 70.63% | 70.63% | 69.33% | 68.69% | -0.34% | -0.06% | -0.01% | 0.00% | -1.30% | -0.64% | -2.36% |
| | Smith/Reese | 85.61% | 85.58% | 85.58% | 85.39% | 85.35% | 82.18% | 82.17% | -0.03% | 0.00% | -0.19% | -0.04% | -3.17% | -0.01% | -3.44% |
| | Southeastern Nevada | 80.05% | 80.05% | 80.05% | 80.03% | 80.01% | 79.45% | 79.45% | 0.00% | 0.00% | -0.01% | -0.02% | -0.56% | 0.00% | -0.60% |
| | Western Pershing | 78.58% | 78.58% | 78.58% | 78.58% | 78.58% | 78.55% | 78.55% | 0.00% | 0.00% | 0.00% | 0.00% | -0.03% | 0.00% | -0.03% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oregon | Baker | 80.18% | 80.09% | 79.55% | 79.50% | 79.38% | 77.50% | 77.47% | -0.09% | -0.54% | -0.05% | -0.12% | -1.88% | -0.03% | -2.71% |
| | Beatys | 93.61% | 93.49% | 93.49% | 93.49% | 93.49% | 92.54% | 92.53% | -0.12% | 0.00% | 0.00% | 0.00% | -0.95% | -0.01% | -1.08% |
| | Brothers/ N Wagontire | 89.98% | 89.98% | 89.93% | 89.93% | 89.93% | 88.10% | 88.10% | 0.00% | -0.05% | 0.00% | 0.00% | -1.83% | 0.00% | -1.88% |
| | Bully Creek | 75.46% | 75.35% | 74.24% | 63.54% | 63.48% | 62.45% | 62.37% | -0.10% | -1.11% | -10.70% | -0.07% | -1.03% | -0.08% | -13.09% |
| | Burns | 69.77% | 68.94% | 68.94% | 68.94% | 68.94% | 67.49% | 67.48% | -0.83% | 0.00% | 0.00% | 0.00% | -1.45% | -0.01% | -2.29% |
| | Cow Lakes | 76.32% | 76.18% | 76.16% | 72.94% | 72.92% | 70.98% | 70.94% | -0.14% | -0.02% | -3.22% | -0.02% | -1.94% | -0.04% | -5.38% |
| | Cow Valley | 82.11% | 81.79% | 78.93% | 77.93% | 77.89% | 76.30% | 76.28% | -0.32% | -2.86% | -1.00% | -0.05% | -1.58% | -0.02% | -5.83% |
| | Crowley | 86.60% | 86.07% | 69.64% | 69.62% | 66.64% | 65.51% | 65.50% | -0.53% | -16.43% | -0.02% | -2.97% | -1.13% | -0.01% | -21.09% |
| | Drewsey | 68.39% | 68.37% | 67.80% | 67.59% | 67.58% | 66.40% | 66.39% | -0.02% | -0.57% | -0.20% | -0.01% | -1.18% | -0.01% | -1.99% |
| | Dry Valley/ Jack Mountain | 63.32% | 63.30% | 63.30% | 63.30% | 63.30% | 62.42% | 62.32% | -0.01% | 0.00% | 0.00% | 0.00% | -0.88% | -0.11% | -1.00% |
| | Folly Farm/ Saddle Butte | 53.79% | 53.71% | 52.18% | 52.18% | 52.09% | 51.09% | 51.09% | -0.09% | -1.53% | 0.00% | -0.09% | -1.00% | 0.00% | -2.70% |
| | Louse Canyon | 70.54% | 69.36% | 69.36% | 69.36% | 69.36% | 68.41% | 68.31% | -1.18% | 0.00% | 0.00% | 0.00% | -0.95% | -0.10% | -2.23% |
| | Paulina/12 Mile/Misery Flat | 81.01% | 81.00% | 81.00% | 80.92% | 80.81% | 79.45% | 79.44% | -0.01% | 0.00% | -0.08% | -0.11% | -1.36% | -0.01% | -1.57% |
| | Picture Rock | 82.48% | 82.45% | 82.44% | 82.44% | 82.44% | 75.20% | 75.20% | -0.03% | -0.01% | 0.00% | 0.00% | -7.24% | 0.00% | -7.28% |
| | Pueblos/ S Steens | 72.33% | 72.33% | 70.56% | 70.56% | 70.55% | 69.81% | 69.81% | 0.00% | -1.77% | 0.00% | -0.01% | -0.74% | 0.00% | -2.52% |
| | Soldier Creek | 86.07% | 84.29% | 84.29% | 83.52% | 83.51% | 82.43% | 82.18% | -1.78% | 0.00% | -0.77% | -0.01% | -1.09% | -0.25% | -3.89% |
| | Steens | 57.92% | 57.92% | 55.58% | 55.58% | 55.58% | 54.78% | 54.78% | 0.00% | -2.34% | 0.00% | 0.00% | -0.80% | -0.01% | -3.14% |
| | Trout Creeks | 34.73% | 34.73% | 34.73% | 34.73% | 34.72% | 34.16% | 34.14% | 0.00% | 0.00% | 0.00% | -0.01% | -0.56% | -0.02% | -0.60% |
| | Tucker Hill | 69.15% | 69.06% | 69.06% | 69.02% | 69.01% | 68.09% | 68.09% | -0.09% | 0.00% | -0.05% | -0.01% | -0.92% | 0.00% | -1.06% |
| | Warners | 87.15% | 86.95% | 86.95% | 86.95% | 86.95% | 85.78% | 85.78% | -0.20% | 0.00% | 0.00% | 0.00% | -1.16% | 0.00% | -1.37% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Utah | Bald Hills | 53.10% | 52.94% | 52.94% | 52.94% | 52.93% | 52.36% | 52.29% | -0.16% | 0.00% | 0.00% | 0.00% | -0.57% | -0.07% | -0.81% |
| | Box Elder | 67.71% | 66.97% | 66.94% | 66.94% | 66.30% | 65.07% | 62.25% | -0.75% | -0.02% | 0.00% | -0.64% | -1.23% | -2.82% | -5.46% |
| | Carbon | 68.18% | 68.18% | 68.18% | 68.18% | 68.18% | 65.91% | 65.91% | 0.00% | 0.00% | 0.00% | 0.00% | -2.27% | 0.00% | -2.27% |
| | Emery | 55.03% | 55.03% | 55.03% | 55.03% | 55.02% | 53.97% | 53.96% | 0.00% | 0.00% | 0.00% | -0.01% | -1.05% | 0.00% | -1.07% |
| | Hamlin Valley | 66.00% | 66.00% | 66.00% | 66.00% | 66.00% | 65.43% | 65.42% | 0.00% | 0.00% | 0.00% | 0.00% | -0.57% | -0.01% | -0.58% |
| | Ibapah | 71.57% | 71.57% | 71.57% | 71.57% | 71.57% | 71.24% | 71.22% | 0.00% | 0.00% | 0.00% | 0.00% | -0.33% | -0.03% | -0.35% |
| | Panguitch | 41.28% | 41.27% | 41.27% | 41.27% | 41.27% | 39.91% | 39.91% | 0.00% | 0.00% | -0.01% | 0.00% | -1.36% | 0.00% | -1.37% |
| | Parker Mtn | 63.49% | 63.49% | 63.49% | 63.49% | 63.21% | 62.49% | 62.44% | 0.00% | 0.00% | 0.00% | -0.27% | -0.72% | -0.05% | -1.05% |
| | Raft River | 64.93% | 64.79% | 64.79% | 64.77% | 64.77% | 63.65% | 63.46% | -0.14% | 0.00% | -0.02% | 0.00% | -1.12% | -0.18% | -1.46% |
| | Rich County | 87.36% | 87.34% | 87.34% | 87.33% | 87.31% | 86.58% | 85.51% | -0.02% | 0.00% | -0.01% | -0.02% | -0.73% | -1.07% | -1.86% |
| | Sheeprocks | 51.91% | 51.84% | 51.52% | 51.51% | 51.49% | 50.70% | 50.60% | -0.07% | -0.31% | -0.02% | -0.02% | -0.79% | -0.10% | -1.31% |
| | Strawberry | 70.27% | 70.27% | 70.27% | 70.24% | 70.24% | 68.25% | 64.69% | 0.00% | 0.00% | -0.02% | 0.00% | -2.00% | -3.56% | -5.58% |
| | Uintah-Diamond Mtn | 60.44% | 60.38% | 60.32% | 60.32% | 60.32% | 59.46% | 59.00% | -0.05% | -0.06% | 0.00% | 0.00% | -0.86% | -0.45% | -1.43% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wyoming | Bear River | 93.58% | 93.58% | 93.57% | 93.57% | 93.47% | 93.01% | 68.68% | 0.00% | 0.00% | 0.00% | -0.11% | -0.46% | -24.33% | -24.91% |
| | Blacks Fork | 76.52% | 76.52% | 76.52% | 76.52% | 76.52% | 75.83% | 75.83% | 0.00% | 0.00% | 0.00% | 0.00% | -0.69% | 0.00% | -0.69% |
| | Buffalo | 85.84% | 85.74% | 85.74% | 85.74% | 85.74% | 85.06% | 85.02% | -0.10% | 0.00% | 0.00% | 0.00% | -0.68% | -0.03% | -0.82% |
| | Buffalo Connectivity | 95.01% | 94.85% | 94.84% | 94.84% | 94.74% | 81.38% | 81.31% | -0.16% | -0.01% | 0.00% | -0.10% | -13.36% | -0.07% | -13.70% |
| | Continental Divide | 89.13% | 89.13% | 89.13% | 89.13% | 89.13% | 88.71% | 88.71% | 0.00% | 0.00% | 0.00% | 0.00% | -0.42% | 0.00% | -0.42% |
| | Daniel | 89.77% | 89.77% | 89.77% | 89.77% | 89.77% | 88.95% | 88.95% | 0.00% | 0.00% | 0.00% | 0.00% | -0.82% | 0.00% | -0.82% |
| | Douglas | 91.34% | 90.86% | 90.84% | 90.83% | 89.67% | 89.06% | 89.06% | -0.48% | -0.02% | -0.01% | -1.16% | -0.61% | 0.00% | -2.28% |
| | Elk Basin East | 81.27% | 81.27% | 81.27% | 81.27% | 81.27% | 80.94% | 80.94% | 0.00% | 0.00% | 0.00% | 0.00% | -0.33% | 0.00% | -0.33% |
| | Elk Basin West | 96.71% | 96.71% | 96.52% | 96.52% | 96.52% | 95.31% | 95.31% | 0.00% | -0.19% | 0.00% | 0.00% | -1.21% | 0.00% | -1.41% |
| | Fontenelle | 88.67% | 88.67% | 88.67% | 88.67% | 88.67% | 87.80% | 87.79% | 0.00% | 0.00% | 0.00% | 0.00% | -0.87% | 0.00% | -0.88% |
| | Grass Creek | 84.47% | 84.47% | 84.47% | 84.46% | 84.46% | 84.08% | 84.08% | 0.00% | 0.00% | 0.00% | 0.00% | -0.38% | 0.00% | -0.39% |
| | Greater South Pass | 84.79% | 84.77% | 84.76% | 84.76% | 84.75% | 84.25% | 84.25% | -0.02% | 0.00% | -0.01% | -0.01% | -0.50% | 0.00% | -0.54% |
| | Hanna | 87.87% | 87.87% | 87.87% | 87.87% | 87.87% | 87.15% | 87.14% | 0.00% | 0.00% | 0.00% | 0.00% | -0.71% | -0.01% | -0.73% |
| | Heart Mountain | 85.89% | 85.88% | 85.88% | 85.87% | 85.87% | 85.56% | 85.55% | -0.01% | 0.00% | -0.01% | 0.00% | -0.31% | 0.00% | -0.33% |
| | Hyattville | 78.19% | 78.17% | 78.01% | 78.00% | 77.99% | 77.20% | 75.54% | -0.02% | -0.16% | -0.01% | -0.01% | -0.78% | -1.66% | -2.65% |
| | Jackson | 80.74% | 80.66% | 80.65% | 80.65% | 80.65% | 79.18% | 79.18% | -0.09% | 0.00% | 0.00% | 0.00% | -1.47% | 0.00% | -1.57% |
| | Little Mountain | 79.78% | 79.58% | 79.58% | 79.58% | 79.57% | 78.87% | 78.87% | -0.20% | 0.00% | 0.00% | -0.01% | -0.70% | 0.00% | -0.91% |
| | Natrona | 89.22% | 89.16% | 89.15% | 89.15% | 89.13% | 88.59% | 88.56% | -0.06% | 0.00% | -0.01% | -0.01% | -0.55% | -0.02% | -0.66% |
| | Newcastle | 88.08% | 87.86% | 87.83% | 87.80% | 87.74% | 86.73% | 86.72% | -0.21% | -0.03% | -0.03% | -0.06% | -1.01% | 0.00% | -1.35% |
| | North Gillette Connectivity | 88.43% | 87.90% | 87.89% | 87.79% | 87.35% | 86.81% | 86.64% | -0.54% | -0.01% | -0.10% | -0.44% | -0.54% | -0.17% | -1.79% |

| State | BSU | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2012 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2013 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2014 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2015 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2016 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2017 | Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs in 2018 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2013 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2013 to 2014 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2014 to 2015 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2015 to 2016 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2016 to 2017 | Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2017 to 2018 | Overall Change in Percentage of BpS that is EVT in PHMAs/ IHMAs within BSUs from 2012 to 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Wyoming** *(continued)* | North Gillette | 92.74% | 92.67% | 92.65% | 92.63% | 91.74% | 90.84% | 90.63% | -0.07% | -0.02% | -0.02% | -0.89% | -0.91% | -0.21% | -2.12% |
| | North Glenrock | 91.29% | 91.05% | 91.05% | 91.05% | 91.04% | 90.33% | 90.32% | -0.24% | 0.00% | 0.00% | 0.00% | -0.71% | -0.02% | -0.97% |
| | North Laramie | 92.44% | 92.44% | 92.44% | 92.44% | 92.44% | 92.19% | 92.19% | 0.00% | 0.00% | 0.00% | 0.00% | -0.25% | 0.00% | -0.26% |
| | Oregon Basin | 76.00% | 76.00% | 75.99% | 75.98% | 75.95% | 75.55% | 75.28% | -0.01% | 0.00% | -0.01% | -0.03% | -0.40% | -0.26% | -0.72% |
| | Powder | 70.06% | 70.06% | 70.06% | 70.06% | 70.06% | 70.02% | 70.02% | 0.00% | 0.00% | 0.00% | 0.00% | -0.05% | 0.00% | -0.05% |
| | Sage | 78.39% | 78.39% | 78.39% | 78.38% | 78.38% | 77.70% | 77.70% | 0.00% | 0.00% | 0.00% | 0.00% | -0.68% | 0.00% | -0.69% |
| | Salt Wells | 80.84% | 80.84% | 80.84% | 80.44% | 80.43% | 80.06% | 77.68% | 0.00% | 0.00% | -0.40% | 0.00% | -0.37% | -2.38% | -3.16% |
| | Seedskadee | 66.92% | 66.92% | 66.92% | 66.92% | 66.92% | 66.70% | 66.70% | 0.00% | 0.00% | 0.00% | 0.00% | -0.22% | 0.00% | -0.22% |
| | Shell | 77.46% | 77.01% | 77.01% | 77.00% | 77.00% | 76.80% | 76.80% | -0.45% | 0.00% | 0.00% | 0.00% | -0.20% | 0.00% | -0.67% |
| | South Rawlins | 78.83% | 78.82% | 78.82% | 78.81% | 78.81% | 78.22% | 78.16% | 0.00% | 0.00% | -0.01% | 0.00% | -0.58% | -0.06% | -0.66% |
| | Thermopolis | 60.34% | 60.34% | 60.34% | 60.34% | 60.34% | 59.78% | 59.78% | 0.00% | 0.00% | 0.00% | 0.00% | -0.56% | 0.00% | -0.56% |
| | Thunder Basin | 87.71% | 87.60% | 87.56% | 87.44% | 87.14% | 86.26% | 86.25% | -0.11% | -0.04% | -0.12% | -0.30% | -0.88% | -0.01% | -1.46% |
| | Uinta | 83.53% | 83.53% | 83.52% | 83.52% | 83.51% | 82.91% | 82.91% | 0.00% | -0.02% | 0.00% | 0.00% | -0.60% | 0.00% | -0.62% |
| | Washakie | 74.36% | 74.19% | 74.19% | 74.19% | 74.18% | 73.49% | 72.13% | -0.16% | 0.00% | 0.00% | -0.01% | -0.69% | -1.35% | -2.22% |

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# Appendix 3: Disturbance Estimates by BSU

| State | BSU ID | Disturbance Estimate by SMA - 2015 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres PHMAs/IHMAs Disturbed within BSUs | | | | | | | % PHMAs/IHMAs Disturbed within BSUs | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 61 | 25 | 89 | 1.89% | N/A | N/A | N/A | 0.83% | 2.10% | 1.03% |
| | Middle Park | 1,148 | 36 | 0 | 116 | 1,832 | 29 | 3,161 | 2.01% | 1.84% | N/A | 0.76% | 1.82% | 1.05% | 1.78% |
| | North Eagle/South Routt | 439 | 39 | 0 | 12 | 1,532 | 0 | 2,023 | 1.50% | 4.46% | N/A | 0.49% | 2.10% | N/A | 1.92% |
| | North Park | 2,236 | 0 | 230 | 302 | 2,092 | 46 | 4,906 | 2.19% | N/A | 1.18% | 1.42% | 1.81% | 3.05% | 1.89% |
| | Northwest Colorado | 6,795 | 0 | 105 | 1,335 | 8,058 | 192 | 16,485 | 1.30% | N/A | 3.62% | 1.35% | 1.53% | 1.54% | 1.42% |
| 2015 | Parachute/Piceance/Roan | 768 | 0 | 0 | 0 | 2,211 | 25 | 3,005 | 2.03% | N/A | N/A | N/A | 2.03% | 1.69% | 2.02% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho | Idaho Desert Conservation Area - IHMA | 3,194 | 3 | 1,607 | 97 | 513 | 0 | 5,414 | 0.68% | 0.39% | 1.05% | 0.33% | 0.69% | 0.00% | 0.74% |
| | Idaho Desert Conservation Area - PHMA | 3,672 | 0 | 64 | 215 | 603 | 0 | 4,555 | 0.45% | N/A | 0.17% | 0.78% | 0.78% | N/A | 0.47% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,503 | 352 | 50 | 277 | 1,706 | 9 | 5,898 | 0.58% | 0.27% | 1.28% | 0.50% | 0.77% | 5.17% | 0.58% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,737 | 431 | 684 | 839 | 3,063 | 0 | 10,754 | 0.57% | 0.35% | 0.84% | 0.56% | 0.83% | N/A | 0.62% |
| | Idaho Southern Conservation Area - IHMA | 2,652 | 1,608 | 0 | 168 | 1,719 | 0 | 6,147 | 0.42% | 0.91% | 0.00% | 0.35% | 0.94% | N/A | 0.58% |
| | Idaho Southern Conservation Area - PHMA | 2,189 | 679 | 1 | 155 | 1,426 | 0 | 4,451 | 0.43% | 1.21% | 0.99% | 0.43% | 0.76% | N/A | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,439 | 0 | 0 | 119 | 419 | 0 | 1,977 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | N/A | 0.40% |
| 2015 | Idaho West Owyhee Conservation Area - PHMA | 2,583 | 0 | 101 | 263 | 547 | 0 | 3,494 | 0.18% | N/A | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,930 | 595 | 3 | 1,128 | 11,184 | 55 | 14,896 | 1.20% | 0.88% | 1.56% | 0.72% | 1.06% | 0.89% | 1.03% |
| | Northern Montana | 7,161 | 0 | 49 | 1,259 | 6,290 | 0 | 14,760 | 0.50% | N/A | 0.63% | 0.66% | 0.86% | 0.00% | 0.62% |
| | Powder River Basin | 33 | 3 | 1 | 71 | 544 | 0 | 652 | 0.66% | 0.88% | 0.38% | 1.53% | 0.79% | N/A | 0.83% |
| | SW Montana Conservation Area | 2,721 | 516 | 185 | 903 | 3,636 | 111 | 8,073 | 0.59% | 0.32% | 0.45% | 0.40% | 0.80% | 0.92% | 0.59% |
| | Wyoming Basin | 713 | 0 | 22 | 173 | 2,444 | 8 | 3,360 | 0.67% | N/A | 1.85% | 1.18% | 1.30% | 0.81% | 1.08% |
| 2015 | Yellowstone Watershed | 3,366 | 7 | 232 | 1,579 | 17,732 | 18 | 22,934 | 0.31% | 2.05% | 0.31% | 0.39% | 0.49% | 0.59% | 0.44% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 424 | 0 | 0 | 0 | 0 | 152 | 576 | 0.18% | N/A | 0.25% | N/A | N/A | 0.59% | 0.22% |
| | Butte/Buck/White Pine | 3,911 | 81 | 10 | 0 | 236 | 0 | 4,237 | 0.60% | 0.41% | 0.53% | N/A | 0.97% | N/A | 0.61% |
| | Central Elko | 6,764 | 1,963 | 77 | 2 | 5,144 | 0 | 13,950 | 0.47% | 0.44% | 1.33% | 0.39% | 0.78% | N/A | 0.54% |
| | Central Great Basin | 6,588 | 97 | 0 | 0 | 4,420 | 0 | 11,105 | 0.55% | 0.37% | N/A | N/A | 3.48% | N/A | 0.83% |
| | East High Desert | 1,301 | 49 | 10 | 0 | 516 | 0 | 1,876 | 0.58% | 0.33% | 0.31% | 0.37% | 1.49% | N/A | 0.67% |
| | Lassen/South Washoe | 2,318 | 0 | 8 | 56 | 86 | 1,359 | 3,826 | 0.34% | N/A | 0.38% | 0.74% | 1.00% | 1.11% | 0.46% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 726 | 0 | 0 | 0 | 9 | 102 | 838 | 0.21% | N/A | N/A | N/A | 0.44% | 0.47% | 0.23% |
| | Monitor | 1,429 | 391 | 11 | 0 | 165 | 0 | 1,996 | 0.45% | 0.32% | 1.31% | N/A | 1.19% | N/A | 0.43% |
| | Northeast Elko | 1,785 | 4 | 0 | 1 | 671 | 0 | 2,461 | 0.30% | 0.70% | N/A | 0.18% | 0.82% | N/A | 0.36% |
| | Northwest Great Basin (NV) | 4,282 | 0 | 1,141 | 0 | 0 | 732 | 6,155 | 0.39% | 0.00% | 0.23% | 0.01% | 0.19% | 0.78% | 0.37% |
| | Northwest Interior | 597 | 0 | 0 | 0 | 340 | 0 | 937 | 0.34% | N/A | N/A | N/A | 0.62% | N/A | 0.40% |
| | Owyhee | 4,387 | 2,840 | 6 | 0 | 2,928 | 0 | 10,162 | 0.33% | 1.21% | 0.43% | N/A | 0.80% | N/A | 0.53% |
| | Pueblo Range | 23 | 0 | 0 | 0 | 0 | 17 | 40 | 0.32% | N/A | N/A | N/A | N/A | 4.05% | 0.53% |
| | Ruby | 2,165 | 332 | 108 | 0 | 2,157 | 0 | 4,763 | 0.51% | 0.40% | 0.86% | N/A | 0.77% | 0.00% | 0.59% |
| | Smith/Reese | 1,196 | 141 | 54 | 0 | 120 | 0 | 1,511 | 0.48% | 0.43% | 1.42% | N/A | 0.84% | N/A | 0.50% |
| | Southeastern Nevada | 1,718 | 7 | 5 | 1 | 224 | 0 | 1,955 | 0.55% | 0.48% | 1.25% | 4.25% | 0.94% | N/A | 0.58% |
| 2015 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1,678 | 23 | 0 | 2 | 3,366 | 0 | 5,069 | 1.49% | 0.79% | 0.00% | 71.20% | 1.52% | N/A | 1.51% |
| | Beatys | 2,928 | 0 | 1,095 | 83 | 394 | 0 | 4,500 | 0.55% | N/A | 0.45% | 0.54% | 0.88% | 0.16% | 0.54% |
| | Brothers/N Wagontire | 2,993 | 307 | 0 | 182 | 1,017 | 0 | 4,499 | 1.57% | 2.35% | N/A | 1.27% | 1.36% | N/A | 1.53% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 8.82% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 713 | 0 | 2,366 | 0.88% | N/A | N/A | 0.24% | 1.20% | N/A | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,283 | 0 | 4,065 | 0.85% | N/A | N/A | 0.42% | 1.20% | N/A | 1.10% |
| | Crowley | 2,757 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,792 | 248 | 0 | 10 | 1,494 | 0 | 3,544 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,154 | 0 | 0 | 17 | 179 | 0 | 3,350 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 119 | 11 | 128 | 0 | 3,844 | 0.56% | N/A | 0.61% | 0.15% | 1.38% | N/A | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,178 | 253 | 0 | 110 | 2,252 | 0 | 3,792 | 0.79% | 1.57% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 479 | 10 | 0 | 7 | 81 | 3 | 580 | 1.30% | 0.74% | N/A | 3.51% | 2.25% | 0.55% | 1.36% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.31% | 0.46% | 0.93% | N/A | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.29% | 0.72% |
| | Tucker Hill | 83 | 1 | 0 | 0 | 140 | 0 | 224 | 0.51% | 0.33% | N/A | N/A | 0.94% | N/A | 0.71% |
| 2015 | Warners | 2,816 | 9 | 0 | 75 | 947 | 0 | 3,848 | 1.13% | 0.96% | N/A | 1.04% | 1.32% | N/A | 1.17% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,417 | 0 | 0 | 257 | 535 | 0 | 3,208 | 0.93% | N/A | N/A | 0.89% | 1.41% | N/A | 0.98% |
| | Box Elder | 2,458 | 0 | 0 | 323 | 3,536 | 0 | 6,316 | 0.56% | 0.10% | N/A | 0.52% | 0.56% | N/A | 0.56% |
| | Carbon | 789 | 98 | 0 | 1,126 | 3,647 | 0 | 5,660 | 1.81% | 1.24% | N/A | 2.93% | 2.15% | N/A | 2.18% |
| | Emery | 0 | 635 | 0 | 0 | 30 | 0 | 665 | 0.00% | 0.78% | N/A | 0.00% | 0.73% | N/A | 0.78% |
| | Hamlin Valley | 537 | 0 | 0 | 51 | 244 | 0 | 832 | 0.53% | N/A | N/A | 0.28% | 1.02% | N/A | 0.58% |
| | Ibapah | 332 | 0 | 200 | 20 | 78 | 0 | 631 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | N/A | 0.71% |
| | Panguitch | 1,627 | 487 | 0 | 263 | 1,663 | 0 | 4,040 | 1.00% | 0.82% | N/A | 0.86% | 1.84% | N/A | 1.17% |
| | Parker Mtn | 2,286 | 1,539 | 11 | 1,381 | 1,194 | 0 | 6,411 | 1.07% | 0.52% | 1.25% | 0.82% | 2.03% | N/A | 0.86% |
| | Raft River | 0 | 324 | 0 | 1 | 51 | 0 | 376 | 0.23% | 0.64% | N/A | 0.15% | 0.32% | N/A | 0.56% |
| | Rich County | 1,190 | 58 | 113 | 642 | 8,383 | 0 | 10,386 | 0.71% | 0.36% | 6.65% | 0.87% | 1.11% | N/A | 1.02% |
| | Sheeprocks | 3,441 | 968 | 0 | 461 | 1,599 | 0 | 6,470 | 0.90% | 1.05% | N/A | 0.88% | 1.33% | N/A | 1.00% |
| | Strawberry | 2 | 701 | 5 | 677 | 1,249 | 0 | 2,633 | 1.31% | 1.71% | 0.54% | 1.31% | 1.84% | N/A | 1.63% |
| 2015 | Uintah-Diamond Mtn | 2,239 | 630 | 180 | 537 | 1,373 | 0 | 4,959 | 0.85% | 0.80% | 0.63% | 0.94% | 0.99% | N/A | 0.88% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 92 | 0 | 13 | 6 | 20 | 0 | 131 | 0.76% | N/A | 3.16% | 0.34% | 0.45% | N/A | 0.70% |
| | Blacks Fork | 385 | 214 | 0 | 23 | 378 | 0 | 1,000 | 0.53% | 0.94% | N/A | 0.85% | 0.55% | 0.32% | 0.60% |
| | Buffalo | 192 | 0 | 0 | 232 | 2,380 | 0 | 2,804 | 0.57% | N/A | N/A | 0.90% | 0.80% | 0.00% | 0.79% |
| | Buffalo Connectivity | 176 | 0 | 0 | 307 | 2,126 | 0 | 2,609 | 0.87% | N/A | N/A | 2.42% | 1.01% | N/A | 1.07% |
| | Continental Divide | 358 | 0 | 0 | 1 | 357 | 0 | 717 | 0.43% | N/A | N/A | 0.08% | 0.41% | N/A | 0.42% |
| | Daniel | 1,522 | 0 | 0 | 180 | 1,920 | 7 | 3,629 | 0.65% | 0.04% | N/A | 0.64% | 0.76% | 0.39% | 0.70% |
| | Douglas | 1 | 0 | 0 | 49 | 599 | 0 | 650 | 0.40% | N/A | N/A | 1.08% | 0.97% | N/A | 0.97% |
| | Elk Basin East | 38 | 0 | 23 | 13 | 173 | 51 | 297 | 0.62% | N/A | 0.47% | 0.90% | 0.77% | 6.36% | 0.83% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 66 | 0 | 76 | 0.84% | N/A | N/A | 0.37% | 0.75% | N/A | 0.73% |
| | Fontenelle | 1,613 | 36 | 0 | 98 | 336 | 0 | 2,084 | 0.78% | 0.78% | N/A | 0.80% | 1.07% | N/A | 0.82% |
| | Grass Creek | 207 | 0 | 0 | 49 | 385 | 0 | 641 | 0.25% | N/A | 0.39% | 0.47% | 0.63% | 0.08% | 0.41% |
| | Greater South Pass | 19,858 | 7 | 546 | 1,931 | 7,043 | 94 | 29,480 | 0.57% | 0.33% | 0.50% | 0.68% | 0.96% | 0.95% | 0.64% |
| | Hanna | 2,864 | 0 | 56 | 376 | 3,978 | 17 | 7,292 | 0.94% | N/A | 0.41% | 1.04% | 1.14% | 0.09% | 1.01% |
| | Heart Mountain | 138 | 0 | 19 | 50 | 346 | 0 | 553 | 0.30% | N/A | 0.25% | 0.30% | 0.60% | 0.00% | 0.43% |
| | Hyattville | 486 | 0 | 0 | 87 | 170 | 0 | 743 | 0.44% | N/A | N/A | 0.69% | 0.84% | 0.00% | 0.52% |
| | Jackson | 0 | 305 | 0 | 0 | 35 | 0 | 340 | N/A | 0.67% | 0.00% | 0.45% | 1.42% | 0.13% | 0.70% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | N/A | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,117 | 0 | 81 | 1,980 | 7,083 | 33 | 16,294 | 0.67% | 0.00% | 0.91% | 0.64% | 0.69% | 0.45% | 0.68% |
| | Newcastle | 11 | 676 | 0 | 151 | 668 | 41 | 1,546 | 0.30% | 2.58% | N/A | 2.12% | 0.92% | 16.81% | 1.41% |
| 2015 | North Gillette Connectivity | 264 | 80 | 0 | 38 | 1,048 | 0 | 1,429 | 0.80% | 1.26% | N/A | 0.47% | 1.24% | 0.00% | 1.08% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 21 | 595 | 0 | 51 | 593 | 0 | 1,260 | 0.31% | 1.72% | N/A | 0.68% | 0.81% | N/A | 1.03% |
| | North Glenrock | 201 | 0 | 0 | 95 | 757 | 0 | 1,052 | 0.60% | N/A | N/A | 0.77% | 0.94% | N/A | 0.84% |
| | North Laramie | 41 | 0 | 0 | 78 | 471 | 6 | 597 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 4,903 | 0 | 0 | 283 | 1,859 | 1 | 7,046 | 1.21% | N/A | N/A | 0.62% | 1.20% | 0.11% | 1.16% |
| | Powder | 79 | 0 | 0 | 14 | 0 | 0 | 93 | 0.14% | N/A | N/A | 0.77% | 0.00% | N/A | 0.15% |
| | Sage | 3,731 | 0 | 56 | 464 | 2,273 | 8 | 6,532 | 1.03% | 0.00% | 0.66% | 1.04% | 1.05% | 0.41% | 1.03% |
| | Salt Wells | 1,295 | 0 | 0 | 100 | 511 | 0 | 1,907 | 0.45% | N/A | N/A | 0.43% | 0.62% | N/A | 0.49% |
| | Seedskadee | 351 | 0 | 115 | 0 | 404 | 0 | 871 | 1.68% | N/A | 2.22% | 0.00% | 1.46% | N/A | 1.59% |
| | Shell | 39 | 0 | 0 | 3 | 57 | 0 | 99 | 0.14% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.28% |
| | South Rawlins | 2,738 | 5 | 14 | 728 | 4,307 | 128 | 7,919 | 0.74% | 0.35% | 2.12% | 0.73% | 0.96% | 1.45% | 0.85% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 259 | 2,764 | 0 | 412 | 4,847 | 3 | 8,286 | 0.42% | 1.66% | N/A | 0.75% | 0.86% | 1.53% | 0.98% |
| | Uinta | 971 | 5 | 0 | 24 | 283 | 0 | 1,283 | 0.62% | 2.36% | N/A | 0.53% | 0.39% | 3.43% | 0.55% |
| 2015 | Washakie | 1,877 | 0 | 0 | 354 | 1,016 | 0 | 3,247 | 0.46% | N/A | N/A | 0.57% | 0.59% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **195,455** | **21,220** | **7,495** | **24,010** | **172,417** | **3,278** | **423,875** | **0.58%** | **237,435** | **266,518** | **295,600** | **0.90%** | **0.91%** | **0.70%** |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 65 | 25 | 93 | 1.89% | N/A | N/A | N/A | 0.88% | 2.10% | 1.07% |
| | Middle Park | 1,150 | 36 | 0 | 147 | 1,857 | 29 | 3,219 | 2.01% | 1.84% | N/A | 0.97% | 1.84% | 1.05% | 1.81% |
| | North Eagle/South Routt | 439 | 39 | 0 | 12 | 1,540 | 0 | 2,030 | 1.50% | 4.46% | N/A | 0.49% | 2.11% | N/A | 1.93% |
| | North Park | 2,226 | 0 | 231 | 298 | 2,112 | 46 | 4,912 | 2.18% | N/A | 1.19% | 1.40% | 1.82% | 3.05% | 1.89% |
| | Northwest Colorado | 6,792 | 0 | 105 | 1,334 | 8,093 | 192 | 16,516 | 1.30% | N/A | 3.62% | 1.35% | 1.54% | 1.54% | 1.42% |
| 2016 | Parachute/Piceance/Roan | 780 | 0 | 0 | 0 | 2,209 | 36 | 3,025 | 2.07% | N/A | N/A | N/A | 2.02% | 2.36% | 2.04% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho | Idaho Desert Conservation Area - IHMA | 3,201 | 5 | 1,609 | 97 | 528 | 0 | 5,440 | 0.68% | 0.72% | 1.05% | 0.33% | 0.71% | 0.00% | 0.75% |
| | Idaho Desert Conservation Area - PHMA | 3,670 | 0 | 64 | 214 | 611 | 0 | 4,560 | 0.45% | N/A | 0.17% | 0.78% | 0.79% | N/A | 0.47% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,635 | 380 | 52 | 284 | 1,788 | 9 | 6,149 | 0.60% | 0.29% | 1.32% | 0.52% | 0.81% | 5.12% | 0.60% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,830 | 454 | 684 | 836 | 3,090 | 0 | 10,894 | 0.58% | 0.36% | 0.84% | 0.56% | 0.84% | N/A | 0.63% |
| | Idaho Southern Conservation Area - IHMA | 2,658 | 1,615 | 0 | 171 | 1,731 | 0 | 6,176 | 0.42% | 0.91% | 0.00% | 0.35% | 0.95% | N/A | 0.59% |
| | Idaho Southern Conservation Area - PHMA | 2,252 | 642 | 1 | 160 | 1,438 | 0 | 4,494 | 0.45% | 1.14% | 0.99% | 0.45% | 0.76% | N/A | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,442 | 0 | 0 | 119 | 422 | 0 | 1,983 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | N/A | 0.40% |
| 2016 | Idaho West Owyhee Conservation Area - PHMA | 2,589 | 0 | 101 | 263 | 552 | 0 | 3,505 | 0.18% | N/A | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,914 | 601 | 3 | 1,128 | 11,248 | 55 | 14,949 | 1.19% | 0.89% | 1.56% | 0.72% | 1.07% | 0.89% | 1.04% |
| | Northern Montana | 7,159 | 0 | 49 | 1,259 | 6,291 | 0 | 14,758 | 0.50% | N/A | 0.63% | 0.66% | 0.86% | 0.00% | 0.62% |
| | Powder River Basin | 33 | 3 | 1 | 70 | 547 | 0 | 654 | 0.66% | 0.88% | 0.38% | 1.50% | 0.79% | N/A | 0.83% |
| | SW Montana Conservation Area | 2,726 | 516 | 185 | 913 | 3,693 | 113 | 8,145 | 0.59% | 0.32% | 0.45% | 0.41% | 0.81% | 0.93% | 0.60% |
| | Wyoming Basin | 708 | 0 | 22 | 173 | 2,437 | 7 | 3,348 | 0.67% | N/A | 1.85% | 1.18% | 1.30% | 0.76% | 1.08% |
| 2016 | Yellowstone Watershed | 3,377 | 9 | 230 | 1,576 | 18,019 | 18 | 23,227 | 0.31% | 2.37% | 0.30% | 0.39% | 0.49% | 0.59% | 0.44% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 424 | 0 | 0 | 0 | 0 | 152 | 576 | 0.18% | N/A | 0.25% | N/A | N/A | 0.59% | 0.22% |
| | Butte/Buck/White Pine | 3,939 | 81 | 10 | 0 | 234 | 0 | 4,264 | 0.61% | 0.41% | 0.53% | N/A | 0.97% | N/A | 0.61% |
| | Central Elko | 6,725 | 1,963 | 77 | 2 | 5,707 | 0 | 14,473 | 0.46% | 0.44% | 1.33% | 0.39% | 0.87% | N/A | 0.56% |
| | Central Great Basin | 6,904 | 97 | 0 | 0 | 5,070 | 0 | 12,071 | 0.58% | 0.37% | N/A | N/A | 3.99% | N/A | 0.90% |
| | East High Desert | 1,306 | 49 | 10 | 0 | 518 | 0 | 1,882 | 0.58% | 0.33% | 0.31% | 0.37% | 1.49% | N/A | 0.68% |
| | Lassen/South Washoe | 2,319 | 0 | 8 | 56 | 86 | 1,362 | 3,831 | 0.34% | N/A | 0.38% | 0.74% | 1.00% | 1.11% | 0.46% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 731 | 0 | 0 | 0 | 9 | 108 | 849 | 0.21% | N/A | N/A | N/A | 0.44% | 0.50% | 0.23% |
| | Monitor | 1,429 | 391 | 11 | 0 | 165 | 0 | 1,996 | 0.45% | 0.32% | 1.31% | N/A | 1.19% | N/A | 0.43% |
| | Northeast Elko | 1,785 | 4 | 0 | 1 | 678 | 0 | 2,468 | 0.30% | 0.60% | N/A | 0.18% | 0.83% | N/A | 0.37% |
| | Northwest Great Basin (NV) | 4,294 | 0 | 1,141 | 0 | 0 | 757 | 6,192 | 0.40% | 0.00% | 0.23% | 0.01% | 0.19% | 0.80% | 0.37% |
| | Northwest Interior | 597 | 0 | 0 | 0 | 340 | 0 | 937 | 0.34% | N/A | N/A | N/A | 0.62% | N/A | 0.40% |
| | Owyhee | 4,464 | 2,864 | 7 | 0 | 3,098 | 0 | 10,432 | 0.34% | 1.22% | 0.50% | N/A | 0.85% | N/A | 0.54% |
| | Pueblo Range | 23 | 0 | 0 | 0 | 0 | 17 | 40 | 0.32% | N/A | N/A | N/A | N/A | 4.05% | 0.53% |
| | Ruby | 2,837 | 350 | 109 | 0 | 2,300 | 0 | 5,597 | 0.67% | 0.42% | 0.86% | N/A | 0.82% | 0.00% | 0.70% |
| | Smith/Reese | 1,197 | 141 | 54 | 0 | 123 | 0 | 1,515 | 0.48% | 0.43% | 1.42% | N/A | 0.86% | N/A | 0.50% |
| | Southeastern Nevada | 1,716 | 7 | 5 | 1 | 230 | 0 | 1,959 | 0.55% | 0.48% | 1.25% | 4.25% | 0.97% | N/A | 0.58% |
| 2016 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

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| Oregon | Baker | 1,679 | 23 | 0 | 2 | 3,374 | 0 | 5,078 | 1.49% | 0.79% | 0.00% | 78.56% | 1.53% | N/A | 1.51% |
| | Beatys | 2,927 | 0 | 1,095 | 83 | 394 | 0 | 4,500 | 0.55% | N/A | 0.45% | 0.54% | 0.88% | 0.16% | 0.54% |
| | Brothers/N Wagontire | 2,993 | 307 | 0 | 182 | 1,026 | 0 | 4,508 | 1.57% | 2.35% | N/A | 1.27% | 1.37% | N/A | 1.54% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 8.82% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 713 | 0 | 2,366 | 0.88% | N/A | N/A | 0.24% | 1.20% | N/A | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,304 | 0 | 4,086 | 0.85% | N/A | N/A | 0.42% | 1.21% | N/A | 1.11% |
| | Crowley | 2,757 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,793 | 248 | 0 | 10 | 1,495 | 0 | 3,545 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,154 | 0 | 0 | 17 | 179 | 0 | 3,350 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 119 | 11 | 128 | 0 | 3,844 | 0.56% | N/A | 0.61% | 0.15% | 1.38% | N/A | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,178 | 253 | 0 | 110 | 2,253 | 0 | 3,793 | 0.79% | 1.57% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 479 | 10 | 0 | 7 | 81 | 3 | 580 | 1.30% | 0.74% | N/A | 3.51% | 2.27% | 0.55% | 1.36% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.31% | 0.46% | 0.93% | N/A | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.29% | 0.72% |
| | Tucker Hill | 83 | 1 | 0 | 0 | 143 | 0 | 227 | 0.51% | 0.33% | N/A | N/A | 0.96% | N/A | 0.72% |
| 2016 | Warners | 2,817 | 9 | 0 | 75 | 951 | 0 | 3,853 | 1.13% | 0.96% | N/A | 1.04% | 1.33% | N/A | 1.17% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,419 | 0 | 0 | 257 | 538 | 0 | 3,214 | 0.93% | N/A | N/A | 0.89% | 1.42% | N/A | 0.98% |
| | Box Elder | 2,530 | 0 | 0 | 330 | 3,684 | 0 | 6,544 | 0.58% | 0.10% | N/A | 0.53% | 0.58% | N/A | 0.58% |
| | Carbon | 790 | 96 | 0 | 1,130 | 3,709 | 0 | 5,725 | 1.82% | 1.21% | N/A | 2.94% | 2.19% | N/A | 2.21% |
| | Emery | 0 | 634 | 0 | 0 | 31 | 0 | 666 | 0.00% | 0.78% | N/A | 0.00% | 0.77% | N/A | 0.78% |
| | Hamlin Valley | 537 | 0 | 0 | 51 | 244 | 0 | 832 | 0.53% | N/A | N/A | 0.28% | 1.02% | N/A | 0.58% |
| | Ibapah | 332 | 0 | 201 | 20 | 78 | 0 | 632 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | N/A | 0.71% |
| | Panguitch | 1,646 | 487 | 0 | 271 | 1,786 | 0 | 4,190 | 1.01% | 0.82% | N/A | 0.89% | 1.97% | N/A | 1.22% |
| | Parker Mtn | 2,292 | 1,539 | 11 | 1,381 | 1,197 | 0 | 6,420 | 1.07% | 0.52% | 1.25% | 0.82% | 2.03% | N/A | 0.87% |
| | Raft River | 0 | 324 | 0 | 1 | 54 | 0 | 379 | 0.23% | 0.64% | N/A | 0.15% | 0.34% | N/A | 0.57% |
| | Rich County | 1,205 | 58 | 125 | 641 | 8,517 | 0 | 10,547 | 0.72% | 0.36% | 7.40% | 0.87% | 1.12% | N/A | 1.04% |
| | Sheeprocks | 3,448 | 968 | 0 | 461 | 1,603 | 0 | 6,480 | 0.90% | 1.05% | N/A | 0.88% | 1.33% | N/A | 1.00% |
| | Strawberry | 2 | 701 | 5 | 677 | 1,264 | 0 | 2,650 | 1.31% | 1.71% | 0.54% | 1.31% | 1.87% | N/A | 1.64% |
| 2016 | Uintah-Diamond Mtn | 2,323 | 632 | 183 | 540 | 3,050 | 0 | 6,727 | 0.88% | 0.80% | 0.64% | 0.95% | 2.19% | N/A | 1.19% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 92 | 0 | 13 | 6 | 20 | 0 | 131 | 0.76% | N/A | 3.16% | 0.34% | 0.45% | N/A | 0.70% |
| | Blacks Fork | 384 | 214 | 0 | 23 | 377 | 0 | 998 | 0.53% | 0.94% | N/A | 0.85% | 0.55% | 0.32% | 0.60% |
| | Buffalo | 212 | 0 | 0 | 243 | 2,372 | 0 | 2,826 | 0.63% | N/A | N/A | 0.94% | 0.80% | 0.00% | 0.79% |
| | Buffalo Connectivity | 184 | 0 | 0 | 298 | 2,412 | 0 | 2,893 | 0.91% | N/A | N/A | 2.35% | 1.14% | N/A | 1.19% |
| | Continental Divide | 358 | 0 | 0 | 1 | 343 | 0 | 702 | 0.43% | N/A | N/A | 0.08% | 0.39% | N/A | 0.41% |
| | Daniel | 2,286 | 0 | 0 | 222 | 2,180 | 8 | 4,697 | 0.98% | 0.04% | N/A | 0.79% | 0.87% | 0.48% | 0.91% |
| | Douglas | 1 | 0 | 0 | 51 | 553 | 0 | 606 | 0.40% | N/A | N/A | 1.11% | 0.89% | N/A | 0.91% |
| | Elk Basin East | 38 | 0 | 23 | 13 | 168 | 51 | 292 | 0.63% | N/A | 0.47% | 0.90% | 0.74% | 6.37% | 0.82% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 61 | 0 | 71 | 0.84% | N/A | N/A | 0.37% | 0.69% | N/A | 0.68% |
| | Fontenelle | 1,613 | 36 | 0 | 98 | 334 | 0 | 2,082 | 0.78% | 0.78% | N/A | 0.80% | 1.06% | N/A | 0.82% |
| | Grass Creek | 209 | 0 | 0 | 51 | 405 | 0 | 665 | 0.25% | N/A | 0.39% | 0.49% | 0.66% | 0.08% | 0.43% |
| | Greater South Pass | 22,268 | 11 | 549 | 2,067 | 7,276 | 96 | 32,268 | 0.64% | 0.51% | 0.51% | 0.72% | 1.00% | 0.97% | 0.70% |
| | Hanna | 2,864 | 0 | 52 | 365 | 3,983 | 17 | 7,281 | 0.94% | N/A | 0.38% | 1.01% | 1.14% | 0.09% | 1.01% |
| | Heart Mountain | 138 | 0 | 19 | 50 | 350 | 0 | 557 | 0.30% | N/A | 0.25% | 0.30% | 0.61% | 0.00% | 0.43% |
| | Hyattville | 491 | 0 | 0 | 113 | 171 | 0 | 775 | 0.44% | N/A | N/A | 0.90% | 0.85% | 0.00% | 0.54% |
| | Jackson | 0 | 306 | 0 | 0 | 37 | 0 | 343 | N/A | 0.67% | 0.00% | 0.45% | 1.51% | 0.13% | 0.71% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | N/A | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,084 | 0 | 81 | 2,003 | 7,134 | 33 | 16,336 | 0.67% | 0.00% | 0.91% | 0.65% | 0.70% | 0.45% | 0.68% |
| | Newcastle | 13 | 683 | 0 | 165 | 961 | 40 | 1,861 | 0.36% | 2.61% | N/A | 2.31% | 1.32% | 16.78% | 1.70% |
| 2016 | North Gillete Connectivity | 242 | 80 | 0 | 38 | 1,011 | 0 | 1,371 | 0.73% | 1.25% | N/A | 0.47% | 1.20% | 0.00% | 1.04% |

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| Wyoming *(continued)* | North Gillette | 24 | 590 | 0 | 51 | 610 | 0 | 1,274 | 0.35% | 1.70% | N/A | 0.68% | 0.84% | N/A | 1.05% |
| | North Glenrock | 203 | 0 | 0 | 94 | 787 | 0 | 1,085 | 0.61% | N/A | N/A | 0.76% | 0.98% | N/A | 0.86% |
| | North Laramie | 41 | 0 | 0 | 78 | 472 | 6 | 597 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 4,887 | 0 | 0 | 283 | 1,926 | 1 | 7,097 | 1.20% | N/A | N/A | 0.62% | 1.24% | 0.11% | 1.17% |
| | Powder | 76 | 0 | 0 | 14 | 0 | 0 | 90 | 0.13% | N/A | N/A | 0.77% | 0.00% | N/A | 0.15% |
| | Sage | 3,723 | 0 | 57 | 464 | 2,265 | 8 | 6,516 | 1.03% | 0.00% | 0.66% | 1.04% | 1.04% | 0.41% | 1.03% |
| | Salt Wells | 1,261 | 0 | 0 | 104 | 518 | 0 | 1,883 | 0.44% | N/A | N/A | 0.45% | 0.63% | N/A | 0.48% |
| | Seedskadee | 351 | 0 | 115 | 0 | 399 | 0 | 866 | 1.68% | N/A | 2.22% | 0.00% | 1.44% | N/A | 1.58% |
| | Shell | 39 | 0 | 0 | 3 | 57 | 0 | 99 | 0.14% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.28% |
| | South Rawlins | 2,784 | 5 | 14 | 739 | 4,454 | 126 | 8,121 | 0.75% | 0.35% | 2.12% | 0.74% | 1.00% | 1.43% | 0.88% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 250 | 2,766 | 0 | 393 | 4,783 | 3 | 8,195 | 0.41% | 1.66% | N/A | 0.71% | 0.85% | 1.48% | 0.97% |
| | Uinta | 964 | 5 | 0 | 24 | 291 | 0 | 1,284 | 0.62% | 2.36% | N/A | 0.53% | 0.40% | 3.43% | 0.55% |
| 2016 | Washakie | 1,873 | 0 | 0 | 354 | 1,031 | 0 | 3,259 | 0.46% | N/A | N/A | 0.57% | 0.60% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **200,170** | **21,295** | **7,514** | **24,306** | **178,083** | **3,324** | **434,692** | **0.59%** | **0.76%** | **0.50%** | **0.70%** | **0.93%** | **0.92%** | **0.71%** |

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| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 65 | 25 | 93 | 1.89% | N/A | N/A | N/A | 0.88% | 2.10% | 1.07% |
| | Middle Park | 1,150 | 36 | 0 | 147 | 1,856 | 29 | 3,218 | 2.01% | 1.84% | N/A | 0.96% | 1.84% | 1.05% | 1.81% |
| | North Eagle/South Routt | 438 | 39 | 0 | 12 | 1,541 | 0 | 2,031 | 1.50% | 4.46% | N/A | 0.49% | 2.11% | N/A | 1.93% |
| | North Park | 2,213 | 0 | 231 | 300 | 2,131 | 46 | 4,921 | 2.16% | N/A | 1.19% | 1.41% | 1.84% | 3.05% | 1.89% |
| | Northwest Colorado | 6,810 | 0 | 105 | 1,340 | 8,137 | 191 | 16,583 | 1.31% | N/A | 3.62% | 1.35% | 1.55% | 1.53% | 1.43% |
| 2017 | Parachute/Piceance/Roan | 784 | 0 | 0 | 0 | 2,352 | 36 | 3,172 | 2.08% | N/A | N/A | N/A | 2.16% | 2.36% | 2.14% |

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| Idaho | Idaho Desert Conservation Area - IHMA | 3,210 | 5 | 1,635 | 98 | 543 | 0 | 5,490 | 0.68% | 0.69% | 1.07% | 0.34% | 0.73% | 0.00% | 0.76% |
| | Idaho Desert Conservation Area - PHMA | 3,670 | 0 | 61 | 214 | 612 | 0 | 4,556 | 0.45% | N/A | 0.16% | 0.78% | 0.79% | N/A | 0.47% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,652 | 386 | 52 | 285 | 1,856 | 9 | 6,240 | 0.60% | 0.30% | 1.32% | 0.52% | 0.84% | 5.10% | 0.61% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,832 | 453 | 678 | 838 | 3,121 | 0 | 10,922 | 0.58% | 0.36% | 0.83% | 0.56% | 0.85% | N/A | 0.63% |
| | Idaho Southern Conservation Area - IHMA | 2,651 | 1,637 | 0 | 171 | 1,731 | 0 | 6,191 | 0.42% | 0.93% | 0.00% | 0.35% | 0.95% | N/A | 0.59% |
| | Idaho Southern Conservation Area - PHMA | 2,251 | 642 | 1 | 160 | 1,445 | 0 | 4,499 | 0.45% | 1.14% | 1.06% | 0.45% | 0.77% | N/A | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,442 | 0 | 0 | 119 | 422 | 0 | 1,984 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | N/A | 0.40% |
| 2017 | Idaho West Owyhee Conservation Area - PHMA | 2,588 | 0 | 101 | 263 | 552 | 0 | 3,504 | 0.18% | N/A | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,967 | 600 | 3 | 1,137 | 11,471 | 56 | 15,234 | 1.22% | 0.89% | 1.57% | 0.73% | 1.09% | 0.90% | 1.05% |
| | Northern Montana | 6,768 | 0 | 49 | 1,243 | 6,070 | 0 | 14,129 | 0.47% | N/A | 0.63% | 0.65% | 0.83% | 0.00% | 0.60% |
| | Powder River Basin | 33 | 3 | 1 | 70 | 548 | 0 | 655 | 0.66% | 0.88% | 0.38% | 1.50% | 0.80% | N/A | 0.83% |
| | SW Montana Conservation Area | 2,753 | 607 | 185 | 923 | 3,700 | 113 | 8,281 | 0.60% | 0.37% | 0.45% | 0.41% | 0.81% | 0.93% | 0.61% |
| | Wyoming Basin | 716 | 0 | 22 | 174 | 2,498 | 7 | 3,417 | 0.67% | N/A | 1.85% | 1.18% | 1.33% | 0.76% | 1.10% |
| 2017 | Yellowstone Watershed | 3,387 | 9 | 282 | 1,553 | 17,947 | 18 | 23,195 | 0.31% | 2.37% | 0.37% | 0.39% | 0.49% | 0.59% | 0.44% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 424 | 0 | 0 | 0 | 0 | 152 | 576 | 0.18% | N/A | 0.25% | N/A | N/A | 0.59% | 0.22% |
| | Butte/Buck/White Pine | 3,871 | 81 | 10 | 0 | 213 | 0 | 4,175 | 0.60% | 0.41% | 0.53% | N/A | 0.88% | N/A | 0.60% |
| | Central Elko | 6,722 | 1,966 | 77 | 2 | 5,732 | 0 | 14,499 | 0.46% | 0.44% | 1.33% | 0.38% | 0.87% | N/A | 0.56% |
| | Central Great Basin | 6,965 | 135 | 0 | 0 | 5,123 | 0 | 12,222 | 0.58% | 0.52% | N/A | N/A | 4.03% | N/A | 0.91% |
| | East High Desert | 1,301 | 49 | 10 | 0 | 514 | 0 | 1,874 | 0.58% | 0.33% | 0.31% | 0.37% | 1.48% | N/A | 0.67% |
| | Lassen/South Washoe | 2,319 | 0 | 8 | 56 | 86 | 1,366 | 3,834 | 0.34% | N/A | 0.38% | 0.74% | 1.00% | 1.12% | 0.46% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 731 | 0 | 0 | 0 | 9 | 108 | 849 | 0.21% | N/A | N/A | N/A | 0.44% | 0.50% | 0.23% |
| | Monitor | 1,429 | 391 | 11 | 0 | 165 | 0 | 1,996 | 0.45% | 0.32% | 1.31% | N/A | 1.19% | N/A | 0.43% |
| | Northeast Elko | 1,785 | 4 | 0 | 1 | 680 | 0 | 2,469 | 0.30% | 0.60% | N/A | 0.18% | 0.83% | N/A | 0.37% |
| | Northwest Great Basin (NV) | 4,295 | 0 | 1,141 | 0 | 0 | 756 | 6,193 | 0.40% | 0.00% | 0.23% | 0.01% | 0.19% | 0.80% | 0.37% |
| | Northwest Interior | 598 | 0 | 0 | 0 | 356 | 0 | 954 | 0.34% | N/A | N/A | N/A | 0.65% | N/A | 0.41% |
| | Owyhee | 4,504 | 2,882 | 7 | 0 | 3,128 | 0 | 10,521 | 0.34% | 1.23% | 0.50% | N/A | 0.86% | N/A | 0.54% |
| | Pueblo Range | 23 | 0 | 0 | 0 | 0 | 17 | 40 | 0.32% | N/A | N/A | N/A | N/A | 4.05% | 0.53% |
| | Ruby | 2,933 | 350 | 109 | 0 | 2,319 | 0 | 5,711 | 0.70% | 0.42% | 0.86% | N/A | 0.83% | 0.00% | 0.71% |
| | Smith/Reese | 1,197 | 141 | 54 | 0 | 123 | 0 | 1,515 | 0.48% | 0.43% | 1.42% | N/A | 0.86% | N/A | 0.50% |
| | Southeastern Nevada | 1,716 | 7 | 5 | 1 | 230 | 0 | 1,959 | 0.55% | 0.48% | 1.25% | 4.25% | 0.97% | N/A | 0.58% |
| 2017 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1,684 | 23 | 0 | 2 | 3,380 | 0 | 5,089 | 1.49% | 0.79% | 0.00% | 78.56% | 1.53% | N/A | 1.51% |
| | Beatys | 2,927 | 0 | 1,095 | 83 | 394 | 0 | 4,500 | 0.55% | N/A | 0.45% | 0.54% | 0.88% | 0.16% | 0.54% |
| | Brothers/N Wagontire | 2,993 | 307 | 0 | 182 | 1,026 | 0 | 4,508 | 1.57% | 2.35% | N/A | 1.27% | 1.37% | N/A | 1.54% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 8.82% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 716 | 0 | 2,369 | 0.88% | N/A | N/A | 0.24% | 1.20% | N/A | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,308 | 0 | 4,090 | 0.85% | N/A | N/A | 0.42% | 1.21% | N/A | 1.11% |
| | Crowley | 2,757 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,793 | 248 | 0 | 10 | 1,495 | 0 | 3,545 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,155 | 0 | 0 | 17 | 179 | 0 | 3,351 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 119 | 11 | 128 | 0 | 3,844 | 0.56% | N/A | 0.61% | 0.15% | 1.38% | N/A | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,178 | 255 | 0 | 110 | 2,253 | 0 | 3,795 | 0.79% | 1.58% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 479 | 10 | 0 | 7 | 81 | 3 | 580 | 1.30% | 0.74% | N/A | 3.51% | 2.27% | 0.55% | 1.36% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.31% | 0.46% | 0.93% | N/A | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.29% | 0.72% |
| | Tucker Hill | 83 | 1 | 0 | 0 | 143 | 0 | 227 | 0.51% | 0.33% | N/A | N/A | 0.96% | N/A | 0.72% |
| 2017 | Warners | 2,817 | 9 | 0 | 75 | 952 | 0 | 3,853 | 1.13% | 0.96% | N/A | 1.04% | 1.33% | N/A | 1.17% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,453 | 0 | 0 | 257 | 603 | 0 | 3,312 | 0.94% | N/A | N/A | 0.89% | 1.59% | N/A | 1.01% |
| | Box Elder | 2,529 | 0 | 0 | 330 | 3,682 | 0 | 6,541 | 0.58% | 0.10% | N/A | 0.53% | 0.58% | N/A | 0.58% |
| | Carbon | 792 | 97 | 0 | 1,121 | 3,707 | 0 | 5,718 | 1.82% | 1.23% | N/A | 2.92% | 2.18% | N/A | 2.20% |
| | Emery | 0 | 635 | 0 | 0 | 31 | 0 | 667 | 0.00% | 0.78% | N/A | 0.00% | 0.77% | N/A | 0.78% |
| | Hamlin Valley | 541 | 0 | 0 | 51 | 259 | 0 | 851 | 0.53% | N/A | N/A | 0.28% | 1.08% | N/A | 0.59% |
| | Ibapah | 332 | 0 | 202 | 20 | 78 | 0 | 633 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | N/A | 0.71% |
| | Panguitch | 1,647 | 487 | 0 | 271 | 1,867 | 0 | 4,272 | 1.01% | 0.82% | N/A | 0.89% | 2.06% | N/A | 1.24% |
| | Parker Mtn | 2,292 | 1,539 | 11 | 1,381 | 1,202 | 0 | 6,424 | 1.07% | 0.52% | 1.25% | 0.82% | 2.04% | N/A | 0.87% |
| | Raft River | 0 | 325 | 0 | 1 | 54 | 0 | 380 | 0.23% | 0.65% | N/A | 0.15% | 0.34% | N/A | 0.57% |
| | Rich County | 1,205 | 58 | 125 | 635 | 8,500 | 0 | 10,523 | 0.72% | 0.36% | 7.39% | 0.86% | 1.12% | N/A | 1.04% |
| | Sheeprocks | 3,448 | 978 | 0 | 464 | 1,604 | 0 | 6,494 | 0.90% | 1.06% | N/A | 0.88% | 1.33% | N/A | 1.00% |
| | Strawberry | 2 | 708 | 5 | 678 | 1,269 | 0 | 2,661 | 1.23% | 1.73% | 0.54% | 1.31% | 1.87% | N/A | 1.65% |
| 2017 | Uintah-Diamond Mtn | 2,323 | 651 | 183 | 540 | 3,523 | 0 | 7,220 | 0.89% | 0.83% | 0.64% | 0.95% | 2.53% | N/A | 1.28% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 92 | 0 | 13 | 6 | 20 | 0 | 131 | 0.76% | N/A | 3.16% | 0.34% | 0.45% | N/A | 0.70% |
| | Blacks Fork | 389 | 215 | 0 | 23 | 389 | 0 | 1,016 | 0.53% | 0.95% | N/A | 0.85% | 0.56% | 0.32% | 0.61% |
| | Buffalo | 212 | 0 | 0 | 247 | 2,326 | 0 | 2,786 | 0.63% | N/A | N/A | 0.95% | 0.78% | 0.00% | 0.78% |
| | Buffalo Connectivity | 187 | 0 | 0 | 247 | 2,487 | 0 | 2,922 | 0.93% | N/A | N/A | 1.95% | 1.18% | N/A | 1.20% |
| | Continental Divide | 363 | 0 | 0 | 1 | 318 | 0 | 682 | 0.43% | N/A | N/A | 0.08% | 0.36% | N/A | 0.40% |
| | Daniel | 2,309 | 0 | 0 | 223 | 2,196 | 8 | 4,736 | 0.99% | 0.04% | N/A | 0.80% | 0.87% | 0.48% | 0.92% |
| | Douglas | 2 | 0 | 0 | 51 | 611 | 0 | 664 | 0.48% | N/A | N/A | 1.11% | 0.99% | N/A | 0.99% |
| | Elk Basin East | 41 | 0 | 35 | 13 | 175 | 54 | 318 | 0.68% | N/A | 0.71% | 0.90% | 0.78% | 6.78% | 0.89% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 63 | 0 | 73 | 0.84% | N/A | N/A | 0.37% | 0.71% | N/A | 0.70% |
| | Fontenelle | 1,627 | 36 | 0 | 98 | 347 | 0 | 2,108 | 0.79% | 0.78% | N/A | 0.80% | 1.10% | N/A | 0.83% |
| | Grass Creek | 209 | 0 | 0 | 49 | 405 | 0 | 663 | 0.25% | N/A | 0.39% | 0.47% | 0.66% | 0.08% | 0.43% |
| | Greater South Pass | 22,898 | 11 | 545 | 2,105 | 7,543 | 96 | 33,197 | 0.66% | 0.51% | 0.50% | 0.74% | 1.03% | 0.97% | 0.72% |
| | Hanna | 2,866 | 0 | 52 | 362 | 3,943 | 16 | 7,240 | 0.94% | N/A | 0.38% | 1.00% | 1.13% | 0.08% | 1.00% |
| | Heart Mountain | 144 | 0 | 22 | 53 | 394 | 0 | 612 | 0.31% | N/A | 0.29% | 0.31% | 0.68% | 0.00% | 0.48% |
| | Hyattville | 493 | 0 | 0 | 113 | 157 | 0 | 763 | 0.44% | N/A | N/A | 0.90% | 0.78% | 0.00% | 0.53% |
| | Jackson | 0 | 306 | 0 | 0 | 37 | 0 | 343 | N/A | 0.67% | 0.00% | 0.45% | 1.51% | 0.13% | 0.71% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | N/A | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,065 | 0 | 81 | 1,994 | 7,144 | 34 | 16,318 | 0.67% | 0.00% | 0.91% | 0.65% | 0.70% | 0.46% | 0.68% |
| | Newcastle | 13 | 673 | 0 | 159 | 958 | 41 | 1,844 | 0.36% | 2.57% | N/A | 2.23% | 1.32% | 16.81% | 1.68% |
| 2017 | North Gillette Connectivity | 257 | 80 | 0 | 38 | 1,016 | 0 | 1,391 | 0.78% | 1.25% | N/A | 0.47% | 1.20% | 0.00% | 1.05% |

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| Wyoming *(continued)* | North Gillette | 24 | 602 | 0 | 51 | 610 | 0 | 1,287 | 0.35% | 1.74% | N/A | 0.68% | 0.84% | N/A | 1.06% |
| | North Glenrock | 208 | 0 | 0 | 108 | 794 | 0 | 1,109 | 0.62% | N/A | N/A | 0.88% | 0.99% | N/A | 0.88% |
| | North Laramie | 41 | 0 | 0 | 78 | 474 | 6 | 600 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 5,358 | 0 | 0 | 308 | 1,993 | 1 | 7,660 | 1.32% | N/A | N/A | 0.67% | 1.29% | 0.11% | 1.26% |
| | Powder | 72 | 0 | 0 | 14 | 0 | 0 | 86 | 0.12% | N/A | N/A | 0.77% | 0.00% | N/A | 0.14% |
| | Sage | 3,730 | 0 | 57 | 462 | 2,239 | 8 | 6,495 | 1.03% | 0.00% | 0.66% | 1.04% | 1.03% | 0.41% | 1.02% |
| | Salt Wells | 1,361 | 0 | 0 | 121 | 621 | 0 | 2,103 | 0.47% | N/A | N/A | 0.52% | 0.76% | N/A | 0.54% |
| | Seedskadee | 373 | 0 | 115 | 0 | 419 | 0 | 907 | 1.78% | N/A | 2.22% | 0.00% | 1.52% | N/A | 1.66% |
| | Shell | 39 | 0 | 0 | 3 | 57 | 0 | 99 | 0.14% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.28% |
| | South Rawlins | 2,780 | 5 | 15 | 750 | 4,465 | 126 | 8,141 | 0.75% | 0.35% | 2.26% | 0.75% | 1.00% | 1.43% | 0.88% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 250 | 2,820 | 0 | 394 | 4,778 | 3 | 8,246 | 0.41% | 1.69% | N/A | 0.72% | 0.85% | 1.48% | 0.97% |
| | Uinta | 975 | 5 | 0 | 24 | 294 | 0 | 1,297 | 0.62% | 2.36% | N/A | 0.53% | 0.40% | 3.43% | 0.55% |
| 2017 | Washakie | 1,874 | 0 | 0 | 360 | 1,031 | 0 | 3,265 | 0.46% | N/A | N/A | 0.58% | 0.60% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **201,369** | **21,569** | **7,594** | **24,335** | **179,732** | **3,331** | **437,929** | **0.60%** | **0.77%** | **0.50%** | **0.70%** | **0.94%** | **0.92%** | **0.72%** |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 67 | 25 | 95 | 1.89% | N/A | N/A | N/A | 0.91% | 2.10% | 1.09% |
| | Middle Park | 1,150 | 36 | 0 | 147 | 1,849 | 29 | 3,211 | 2.01% | 1.84% | N/A | 0.96% | 1.84% | 1.05% | 1.81% |
| | North Eagle/South Routt | 435 | 39 | 0 | 8 | 1,522 | 0 | 2,004 | 1.49% | 4.48% | N/A | 0.31% | 2.09% | N/A | 1.90% |
| | North Park | 2,205 | 0 | 231 | 295 | 2,126 | 46 | 4,904 | 2.16% | N/A | 1.19% | 1.39% | 1.84% | 3.05% | 1.88% |
| | Northwest Colorado | 6,747 | 0 | 105 | 1,314 | 8,021 | 191 | 16,378 | 1.29% | N/A | 3.62% | 1.33% | 1.53% | 1.53% | 1.41% |
| 2018 | Parachute/Piceance/Roan | 780 | 0 | 0 | 0 | 2,323 | 36 | 3,138 | 2.07% | N/A | N/A | N/A | 2.13% | 2.36% | 2.11% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho | Idaho Desert Conservation Area - IHMA | 3,221 | 5 | 1,635 | 110 | 556 | 0 | 5,527 | 0.69% | 0.69% | 1.07% | 0.38% | 0.75% | 0.00% | 0.76% |
| | Idaho Desert Conservation Area - PHMA | 3,593 | 0 | 61 | 199 | 660 | 0 | 4,513 | 0.44% | N/A | 0.16% | 0.73% | 0.85% | N/A | 0.47% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,652 | 386 | 52 | 285 | 1,858 | 9 | 6,242 | 0.60% | 0.30% | 1.32% | 0.52% | 0.84% | 5.11% | 0.61% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,832 | 453 | 678 | 838 | 3,122 | 0 | 10,923 | 0.58% | 0.36% | 0.83% | 0.56% | 0.85% | N/A | 0.63% |
| | Idaho Southern Conservation Area - IHMA | 2,654 | 1,637 | 0 | 171 | 1,731 | 0 | 6,193 | 0.42% | 0.93% | 0.00% | 0.35% | 0.95% | N/A | 0.59% |
| | Idaho Southern Conservation Area - PHMA | 2,261 | 642 | 1 | 160 | 1,445 | 0 | 4,510 | 0.45% | 1.14% | 1.06% | 0.45% | 0.77% | N/A | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,445 | 0 | 0 | 119 | 422 | 0 | 1,986 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | N/A | 0.40% |
| 2018 | Idaho West Owyhee Conservation Area - PHMA | 2,588 | 0 | 101 | 263 | 552 | 0 | 3,504 | 0.18% | N/A | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,967 | 604 | 3 | 1,106 | 11,380 | 55 | 15,115 | 1.22% | 0.90% | 1.57% | 0.71% | 1.08% | 0.88% | 1.05% |
| | Northern Montana | 6,768 | 0 | 49 | 1,243 | 6,069 | 0 | 14,129 | 0.47% | N/A | 0.63% | 0.65% | 0.83% | 0.00% | 0.60% |
| | Powder River Basin | 34 | 3 | 1 | 70 | 548 | 0 | 655 | 0.67% | 0.88% | 0.38% | 1.50% | 0.80% | N/A | 0.83% |
| | SW Montana Conservation Area | 2,770 | 607 | 185 | 928 | 3,703 | 113 | 8,306 | 0.60% | 0.37% | 0.45% | 0.41% | 0.81% | 0.93% | 0.61% |
| | Wyoming Basin | 728 | 0 | 20 | 172 | 2,500 | 8 | 3,428 | 0.69% | N/A | 1.66% | 1.17% | 1.33% | 0.88% | 1.10% |
| 2018 | Yellowstone Watershed | 3,387 | 9 | 282 | 1,549 | 17,934 | 15 | 23,176 | 0.31% | 2.37% | 0.37% | 0.39% | 0.49% | 0.51% | 0.44% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 424 | 0 | 0 | 0 | 0 | 152 | 576 | 0.18% | N/A | 0.25% | N/A | N/A | 0.59% | 0.22% |
| | Butte/Buck/White Pine | 3,871 | 81 | 10 | 0 | 213 | 0 | 4,175 | 0.60% | 0.41% | 0.53% | N/A | 0.88% | N/A | 0.60% |
| | Central Elko | 6,739 | 1,973 | 77 | 2 | 5,749 | 0 | 14,539 | 0.46% | 0.44% | 1.33% | 0.38% | 0.87% | N/A | 0.57% |
| | Central Great Basin | 7,256 | 135 | 0 | 0 | 5,135 | 0 | 12,526 | 0.61% | 0.52% | N/A | N/A | 4.04% | N/A | 0.93% |
| | East High Desert | 1,301 | 49 | 10 | 0 | 514 | 0 | 1,873 | 0.58% | 0.33% | 0.31% | 0.37% | 1.48% | N/A | 0.67% |
| | Lassen/South Washoe | 2,319 | 0 | 8 | 56 | 86 | 1,366 | 3,834 | 0.34% | N/A | 0.38% | 0.74% | 1.00% | 1.12% | 0.46% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 731 | 0 | 0 | 0 | 9 | 108 | 849 | 0.21% | N/A | N/A | N/A | 0.44% | 0.50% | 0.23% |
| | Monitor | 1,429 | 391 | 11 | 0 | 165 | 0 | 1,996 | 0.45% | 0.32% | 1.31% | N/A | 1.19% | N/A | 0.43% |
| | Northeast Elko | 1,785 | 4 | 0 | 1 | 680 | 0 | 2,469 | 0.30% | 0.60% | N/A | 0.18% | 0.83% | N/A | 0.37% |
| | Northwest Great Basin (NV) | 4,295 | 0 | 1,141 | 0 | 0 | 756 | 6,193 | 0.40% | 0.00% | 0.23% | 0.01% | 0.19% | 0.80% | 0.37% |
| | Northwest Interior | 598 | 0 | 0 | 0 | 356 | 0 | 954 | 0.34% | N/A | N/A | N/A | 0.65% | N/A | 0.41% |
| | Owyhee | 4,506 | 2,882 | 7 | 0 | 3,131 | 0 | 10,526 | 0.34% | 1.23% | 0.50% | N/A | 0.86% | N/A | 0.54% |
| | Pueblo Range | 23 | 0 | 0 | 0 | 0 | 17 | 40 | 0.32% | N/A | N/A | N/A | N/A | 4.05% | 0.53% |
| | Ruby | 3,068 | 354 | 109 | 0 | 2,343 | 0 | 5,874 | 0.73% | 0.43% | 0.86% | N/A | 0.84% | 0.00% | 0.73% |
| | Smith/Reese | 1,202 | 141 | 54 | 0 | 123 | 0 | 1,519 | 0.48% | 0.43% | 1.42% | N/A | 0.86% | N/A | 0.50% |
| | Southeastern Nevada | 1,716 | 7 | 5 | 1 | 230 | 0 | 1,958 | 0.55% | 0.48% | 1.25% | 4.25% | 0.97% | N/A | 0.58% |
| 2018 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1,684 | 23 | 0 | 2 | 3,380 | 0 | 5,089 | 1.49% | 0.79% | 0.00% | 78.56% | 1.53% | N/A | 1.51% |
| | Beatys | 2,932 | 0 | 1,095 | 83 | 394 | 0 | 4,504 | 0.55% | N/A | 0.45% | 0.54% | 0.88% | 0.16% | 0.54% |
| | Brothers/N Wagontire | 2,993 | 307 | 0 | 182 | 1,028 | 0 | 4,511 | 1.57% | 2.35% | N/A | 1.27% | 1.37% | N/A | 1.54% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 8.82% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 716 | 0 | 2,369 | 0.88% | N/A | N/A | 0.24% | 1.20% | N/A | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,308 | 0 | 4,090 | 0.85% | N/A | N/A | 0.42% | 1.21% | N/A | 1.11% |
| | Crowley | 2,757 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,793 | 248 | 0 | 10 | 1,495 | 0 | 3,545 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,155 | 0 | 0 | 17 | 179 | 0 | 3,351 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 119 | 11 | 128 | 0 | 3,844 | 0.56% | N/A | 0.61% | 0.15% | 1.38% | N/A | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,178 | 255 | 0 | 110 | 2,253 | 0 | 3,795 | 0.79% | 1.58% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 479 | 10 | 0 | 7 | 81 | 3 | 580 | 1.30% | 0.74% | N/A | 3.51% | 2.27% | 0.55% | 1.36% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.31% | 0.46% | 0.93% | N/A | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.29% | 0.72% |
| | Tucker Hill | 83 | 1 | 0 | 0 | 143 | 0 | 227 | 0.51% | 0.33% | N/A | N/A | 0.96% | N/A | 0.72% |
| 2018 | Warners | 2,817 | 9 | 0 | 75 | 952 | 0 | 3,853 | 1.13% | 0.96% | N/A | 1.04% | 1.33% | N/A | 1.17% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,453 | 0 | 0 | 257 | 603 | 0 | 3,312 | 0.94% | N/A | N/A | 0.89% | 1.59% | N/A | 1.01% |
| | Box Elder | 2,527 | 0 | 0 | 330 | 3,681 | 0 | 6,539 | 0.58% | 0.10% | N/A | 0.53% | 0.58% | N/A | 0.58% |
| | Carbon | 793 | 97 | 0 | 1,117 | 3,710 | 0 | 5,717 | 1.82% | 1.23% | N/A | 2.90% | 2.19% | N/A | 2.20% |
| | Emery | 0 | 634 | 0 | 0 | 31 | 0 | 666 | 0.00% | 0.78% | N/A | 0.00% | 0.77% | N/A | 0.78% |
| | Hamlin Valley | 541 | 0 | 0 | 51 | 259 | 0 | 851 | 0.53% | N/A | N/A | 0.28% | 1.08% | N/A | 0.59% |
| | Ibapah | 332 | 0 | 202 | 20 | 78 | 0 | 633 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | N/A | 0.71% |
| | Panguitch | 1,648 | 487 | 0 | 271 | 1,887 | 0 | 4,293 | 1.01% | 0.82% | N/A | 0.89% | 2.08% | N/A | 1.25% |
| | Parker Mtn | 2,295 | 1,575 | 12 | 1,422 | 1,257 | 0 | 6,561 | 1.07% | 0.53% | 1.29% | 0.84% | 2.14% | N/A | 0.88% |
| | Raft River | 0 | 325 | 0 | 1 | 54 | 0 | 380 | 0.23% | 0.65% | N/A | 0.15% | 0.34% | N/A | 0.57% |
| | Rich County | 1,205 | 58 | 125 | 635 | 8,493 | 0 | 10,516 | 0.72% | 0.36% | 7.39% | 0.86% | 1.12% | N/A | 1.03% |
| | Sheeprocks | 3,450 | 978 | 0 | 464 | 1,604 | 0 | 6,496 | 0.90% | 1.06% | N/A | 0.88% | 1.33% | N/A | 1.00% |
| | Strawberry | 2 | 708 | 5 | 662 | 1,259 | 0 | 2,635 | 1.23% | 1.73% | 0.54% | 1.28% | 1.86% | N/A | 1.63% |
| 2018 | Uintah-Diamond Mtn | 2,326 | 642 | 183 | 539 | 3,725 | 0 | 7,415 | 0.89% | 0.82% | 0.64% | 0.95% | 2.67% | N/A | 1.31% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 92 | 0 | 13 | 6 | 20 | 0 | 131 | 0.76% | N/A | 3.16% | 0.34% | 0.45% | N/A | 0.70% |
| | Blacks Fork | 389 | 215 | 0 | 23 | 389 | 0 | 1,016 | 0.53% | 0.95% | N/A | 0.85% | 0.56% | 0.32% | 0.61% |
| | Buffalo | 212 | 0 | 0 | 238 | 2,328 | 0 | 2,778 | 0.63% | N/A | N/A | 0.92% | 0.78% | 0.00% | 0.78% |
| | Buffalo Connectivity | 138 | 0 | 0 | 243 | 2,424 | 0 | 2,804 | 0.68% | N/A | N/A | 1.91% | 1.15% | N/A | 1.15% |
| | Continental Divide | 363 | 0 | 0 | 1 | 308 | 0 | 672 | 0.43% | N/A | N/A | 0.08% | 0.35% | N/A | 0.39% |
| | Daniel | 2,291 | 0 | 0 | 222 | 2,195 | 8 | 4,717 | 0.98% | 0.04% | N/A | 0.80% | 0.87% | 0.48% | 0.91% |
| | Douglas | 2 | 0 | 0 | 51 | 635 | 0 | 688 | 0.48% | N/A | N/A | 1.11% | 1.03% | N/A | 1.03% |
| | Elk Basin East | 41 | 0 | 35 | 13 | 175 | 54 | 318 | 0.68% | N/A | 0.71% | 0.90% | 0.78% | 6.78% | 0.89% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 77 | 0 | 87 | 0.84% | N/A | N/A | 0.37% | 0.87% | N/A | 0.84% |
| | Fontenelle | 1,627 | 36 | 0 | 98 | 351 | 0 | 2,112 | 0.79% | 0.78% | N/A | 0.80% | 1.12% | N/A | 0.83% |
| | Grass Creek | 214 | 0 | 0 | 49 | 407 | 0 | 670 | 0.26% | N/A | 0.39% | 0.47% | 0.66% | 0.08% | 0.43% |
| | Greater South Pass | 22,933 | 11 | 545 | 2,112 | 7,523 | 92 | 33,215 | 0.66% | 0.51% | 0.50% | 0.74% | 1.03% | 0.92% | 0.72% |
| | Hanna | 2,863 | 0 | 52 | 362 | 3,946 | 16 | 7,240 | 0.94% | N/A | 0.38% | 1.00% | 1.13% | 0.08% | 1.00% |
| | Heart Mountain | 144 | 0 | 22 | 53 | 397 | 0 | 615 | 0.31% | N/A | 0.29% | 0.31% | 0.69% | 0.00% | 0.48% |
| | Hyattville | 488 | 0 | 0 | 113 | 157 | 0 | 758 | 0.44% | N/A | N/A | 0.90% | 0.78% | 0.00% | 0.53% |
| | Jackson | 0 | 306 | 0 | 0 | 37 | 0 | 343 | N/A | 0.67% | 0.00% | 0.45% | 1.51% | 0.13% | 0.71% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | N/A | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,072 | 0 | 81 | 1,995 | 7,144 | 34 | 16,327 | 0.67% | 0.00% | 0.91% | 0.65% | 0.70% | 0.46% | 0.68% |
| | Newcastle | 13 | 673 | 0 | 159 | 953 | 41 | 1,838 | 0.36% | 2.57% | N/A | 2.23% | 1.31% | 16.81% | 1.68% |
| 2018 | North Gillette Connectivity | 263 | 80 | 0 | 38 | 1,040 | 0 | 1,421 | 0.80% | 1.25% | N/A | 0.47% | 1.23% | 0.00% | 1.08% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 24 | 599 | 0 | 51 | 607 | 0 | 1,280 | 0.35% | 1.73% | N/A | 0.68% | 0.83% | N/A | 1.05% |
| | North Glenrock | 209 | 0 | 0 | 105 | 831 | 0 | 1,146 | 0.63% | N/A | N/A | 0.86% | 1.04% | N/A | 0.91% |
| | North Laramie | 41 | 0 | 0 | 78 | 474 | 6 | 600 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 5,726 | 0 | 0 | 317 | 2,049 | 1 | 8,093 | 1.41% | N/A | N/A | 0.69% | 1.32% | 0.11% | 1.33% |
| | Powder | 72 | 0 | 0 | 14 | 0 | 0 | 86 | 0.13% | N/A | N/A | 0.77% | 0.00% | N/A | 0.14% |
| | Sage | 3,730 | 0 | 57 | 462 | 2,234 | 8 | 6,490 | 1.03% | 0.00% | 0.66% | 1.04% | 1.03% | 0.41% | 1.02% |
| | Salt Wells | 1,358 | 0 | 0 | 121 | 622 | 0 | 2,100 | 0.47% | N/A | N/A | 0.52% | 0.76% | N/A | 0.54% |
| | Seedskadee | 378 | 0 | 115 | 0 | 419 | 0 | 911 | 1.80% | N/A | 2.22% | 0.00% | 1.52% | N/A | 1.67% |
| | Shell | 39 | 0 | 0 | 3 | 57 | 0 | 99 | 0.14% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.28% |
| | South Rawlins | 2,761 | 5 | 15 | 751 | 4,458 | 129 | 8,118 | 0.75% | 0.35% | 2.26% | 0.75% | 1.00% | 1.46% | 0.87% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 255 | 2,820 | 0 | 406 | 4,769 | 3 | 8,253 | 0.42% | 1.69% | N/A | 0.74% | 0.84% | 1.48% | 0.97% |
| | Uinta | 980 | 5 | 0 | 24 | 294 | 0 | 1,303 | 0.63% | 2.36% | N/A | 0.53% | 0.40% | 3.43% | 0.56% |
| 2018 | Washakie | 1,874 | 0 | 0 | 360 | 1,036 | 0 | 3,271 | 0.46% | N/A | N/A | 0.58% | 0.60% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **202,068** | **21,609** | **7,592** | **24,300** | **179,899** | **3,325** | **438,792** | **0.60%** | **0.77%** | **0.50%** | **0.70%** | **0.94%** | **0.92%** | **0.72%** |

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| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 67 | 25 | 95 | 1.89% | N/A | N/A | N/A | 0.91% | 2.10% | 1.09% |
| | Middle Park | 1,150 | 36 | 0 | 147 | 1,849 | 29 | 3,211 | 2.01% | 1.84% | N/A | 0.96% | 1.84% | 1.05% | 1.81% |
| | North Eagle/South Routt | 435 | 39 | 0 | 8 | 1,522 | 0 | 2,004 | 1.49% | 4.48% | N/A | 0.31% | 2.09% | N/A | 1.90% |
| | North Park | 2,214 | 0 | 231 | 305 | 2,141 | 46 | 4,936 | 2.16% | N/A | 1.19% | 1.43% | 1.85% | 3.05% | 1.90% |
| | Northwest Colorado | 6,735 | 0 | 105 | 1,288 | 7,849 | 191 | 16,168 | 1.29% | N/A | 3.62% | 1.30% | 1.49% | 1.53% | 1.39% |
| 2019 | Parachute/Piceance/Roan | 819 | 0 | 0 | 0 | 2,593 | 36 | 3,448 | 2.17% | N/A | N/A | N/A | 2.38% | 2.36% | 2.32% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho | Idaho Desert Conservation Area - IHMA | 3,203 | 5 | 1,635 | 110 | 557 | 0 | 5,509 | 0.68% | 0.69% | 1.07% | 0.38% | 0.75% | 0.00% | 0.76% |
| | Idaho Desert Conservation Area - PHMA | 3,340 | 0 | 61 | 155 | 640 | 0 | 4,196 | 0.41% | N/A | 0.16% | 0.56% | 0.82% | N/A | 0.44% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,656 | 386 | 52 | 285 | 1,858 | 9 | 6,247 | 0.60% | 0.30% | 1.32% | 0.52% | 0.84% | 5.11% | 0.61% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,840 | 454 | 677 | 845 | 3,128 | 0 | 10,945 | 0.58% | 0.36% | 0.83% | 0.57% | 0.85% | N/A | 0.63% |
| | Idaho Southern Conservation Area - IHMA | 2,661 | 1,637 | 0 | 172 | 1,735 | 0 | 6,205 | 0.42% | 0.93% | 0.00% | 0.35% | 0.95% | N/A | 0.59% |
| | Idaho Southern Conservation Area - PHMA | 2,260 | 642 | 1 | 160 | 1,444 | 0 | 4,507 | 0.45% | 1.14% | 1.06% | 0.45% | 0.77% | N/A | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,446 | 0 | 0 | 121 | 422 | 0 | 1,989 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | N/A | 0.40% |
| 2019 | Idaho West Owyhee Conservation Area - PHMA | 2,596 | 0 | 101 | 263 | 552 | 0 | 3,512 | 0.18% | N/A | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,971 | 604 | 3 | 1,106 | 11,411 | 50 | 15,146 | 1.22% | 0.90% | 1.57% | 0.71% | 1.08% | 0.81% | 1.05% |
| | Northern Montana | 6,757 | 0 | 49 | 1,232 | 5,884 | 0 | 13,923 | 0.47% | N/A | 0.63% | 0.64% | 0.81% | 0.00% | 0.59% |
| | Powder River Basin | 35 | 12 | 1 | 70 | 548 | 0 | 665 | 0.71% | 3.42% | 0.38% | 1.50% | 0.80% | N/A | 0.84% |
| | SW Montana Conservation Area | 2,770 | 618 | 185 | 928 | 3,703 | 113 | 8,316 | 0.60% | 0.38% | 0.45% | 0.41% | 0.81% | 0.93% | 0.61% |
| | Wyoming Basin | 728 | 0 | 20 | 172 | 2,504 | 8 | 3,432 | 0.69% | N/A | 1.66% | 1.17% | 1.33% | 0.88% | 1.10% |
| 2019 | Yellowstone Watershed | 3,305 | 9 | 275 | 1,549 | 17,650 | 15 | 22,803 | 0.30% | 2.43% | 0.36% | 0.39% | 0.48% | 0.51% | 0.44% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 424 | 0 | 0 | 0 | 0 | 152 | 576 | 0.18% | N/A | 0.25% | N/A | N/A | 0.59% | 0.22% |
| | Butte/Buck/White Pine | 3,875 | 81 | 10 | 0 | 216 | 0 | 4,182 | 0.60% | 0.41% | 0.53% | N/A | 0.89% | N/A | 0.60% |
| | Central Elko | 6,738 | 1,984 | 77 | 2 | 5,754 | 0 | 14,554 | 0.46% | 0.44% | 1.33% | 0.38% | 0.87% | N/A | 0.57% |
| | Central Great Basin | 7,394 | 135 | 0 | 0 | 5,178 | 0 | 12,706 | 0.62% | 0.52% | N/A | N/A | 4.07% | N/A | 0.95% |
| | East High Desert | 1,266 | 49 | 10 | 0 | 373 | 0 | 1,698 | 0.56% | 0.33% | 0.31% | 0.37% | 1.08% | N/A | 0.61% |
| | Lassen/South Washoe | 2,415 | 0 | 8 | 56 | 98 | 1,403 | 3,979 | 0.35% | N/A | 0.38% | 0.74% | 1.15% | 1.15% | 0.48% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 731 | 0 | 0 | 0 | 9 | 108 | 849 | 0.21% | N/A | N/A | N/A | 0.44% | 0.50% | 0.23% |
| | Monitor | 1,429 | 391 | 11 | 0 | 165 | 0 | 1,996 | 0.45% | 0.32% | 1.31% | N/A | 1.19% | N/A | 0.43% |
| | Northeast Elko | 1,786 | 4 | 0 | 1 | 677 | 0 | 2,468 | 0.30% | 0.60% | N/A | 0.18% | 0.83% | N/A | 0.37% |
| | Northwest Great Basin (NV) | 4,294 | 0 | 1,141 | 0 | 0 | 756 | 6,192 | 0.40% | 0.00% | 0.23% | 0.01% | 0.19% | 0.80% | 0.37% |
| | Northwest Interior | 598 | 0 | 0 | 0 | 356 | 0 | 954 | 0.34% | N/A | N/A | N/A | 0.65% | N/A | 0.41% |
| | Owyhee | 4,516 | 2,895 | 7 | 0 | 3,296 | 0 | 10,714 | 0.34% | 1.24% | 0.50% | N/A | 0.90% | N/A | 0.55% |
| | Pueblo Range | 23 | 0 | 0 | 0 | 0 | 17 | 40 | 0.32% | N/A | N/A | N/A | N/A | 4.05% | 0.53% |
| | Ruby | 3,141 | 354 | 109 | 0 | 2,343 | 0 | 5,947 | 0.74% | 0.43% | 0.86% | N/A | 0.84% | 0.00% | 0.74% |
| | Smith/Reese | 1,202 | 141 | 54 | 0 | 123 | 0 | 1,519 | 0.48% | 0.43% | 1.42% | N/A | 0.86% | N/A | 0.50% |
| | Southeastern Nevada | 1,716 | 7 | 5 | 1 | 230 | 0 | 1,959 | 0.55% | 0.48% | 1.25% | 4.25% | 0.97% | N/A | 0.58% |
| 2019 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1,684 | 23 | 0 | 2 | 3,380 | 0 | 5,089 | 1.49% | 0.79% | 0.00% | 78.56% | 1.53% | N/A | 1.51% |
| | Beatys | 2,932 | 0 | 1,095 | 83 | 394 | 0 | 4,504 | 0.55% | N/A | 0.45% | 0.54% | 0.88% | 0.16% | 0.54% |
| | Brothers/N Wagontire | 2,993 | 307 | 0 | 182 | 1,028 | 0 | 4,510 | 1.57% | 2.35% | N/A | 1.27% | 1.37% | N/A | 1.54% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 8.82% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 716 | 0 | 2,369 | 0.88% | N/A | N/A | 0.24% | 1.20% | N/A | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,308 | 0 | 4,090 | 0.85% | N/A | N/A | 0.42% | 1.21% | N/A | 1.11% |
| | Crowley | 2,756 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,793 | 248 | 0 | 10 | 1,495 | 0 | 3,545 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,155 | 0 | 0 | 17 | 179 | 0 | 3,351 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 119 | 11 | 128 | 0 | 3,844 | 0.56% | N/A | 0.61% | 0.15% | 1.38% | N/A | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,178 | 255 | 0 | 110 | 2,253 | 0 | 3,795 | 0.79% | 1.58% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 479 | 10 | 0 | 7 | 81 | 3 | 580 | 1.30% | 0.74% | N/A | 3.51% | 2.27% | 0.55% | 1.36% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.31% | 0.46% | 0.93% | N/A | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.29% | 0.72% |
| | Tucker Hill | 83 | 1 | 0 | 0 | 143 | 0 | 227 | 0.51% | 0.33% | N/A | N/A | 0.96% | N/A | 0.72% |
| 2019 | Warners | 2,817 | 9 | 0 | 75 | 952 | 0 | 3,853 | 1.13% | 0.96% | N/A | 1.04% | 1.33% | N/A | 1.17% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,457 | 0 | 0 | 260 | 611 | 0 | 3,328 | 0.95% | N/A | N/A | 0.90% | 1.61% | N/A | 1.02% |
| | Box Elder | 2,522 | 0 | 0 | 334 | 3,687 | 0 | 6,543 | 0.57% | 0.10% | N/A | 0.54% | 0.58% | N/A | 0.58% |
| | Carbon | 793 | 98 | 0 | 1,117 | 3,708 | 0 | 5,715 | 1.82% | 1.24% | N/A | 2.90% | 2.19% | N/A | 2.20% |
| | Emery | 0 | 679 | 0 | 0 | 30 | 0 | 709 | 0.23% | 0.83% | N/A | 0.00% | 0.74% | N/A | 0.83% |
| | Hamlin Valley | 540 | 0 | 0 | 51 | 260 | 0 | 852 | 0.53% | N/A | N/A | 0.28% | 1.08% | N/A | 0.59% |
| | Ibapah | 333 | 0 | 202 | 20 | 78 | 0 | 633 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | N/A | 0.71% |
| | Panguitch | 2,274 | 523 | 0 | 313 | 1,990 | 0 | 5,100 | 1.39% | 0.88% | N/A | 1.02% | 2.20% | N/A | 1.48% |
| | Parker Mtn | 2,535 | 1,683 | 12 | 1,562 | 1,368 | 0 | 7,159 | 1.18% | 0.56% | 1.29% | 0.92% | 2.33% | N/A | 0.97% |
| | Raft River | 0 | 325 | 0 | 1 | 54 | 0 | 380 | 0.23% | 0.65% | N/A | 0.15% | 0.34% | N/A | 0.57% |
| | Rich County | 1,199 | 58 | 125 | 621 | 8,481 | 0 | 10,485 | 0.72% | 0.36% | 7.38% | 0.84% | 1.12% | N/A | 1.03% |
| | Sheeprocks | 3,115 | 978 | 0 | 401 | 1,509 | 0 | 6,003 | 0.82% | 1.06% | N/A | 0.76% | 1.25% | N/A | 0.93% |
| | Strawberry | 2 | 708 | 5 | 662 | 1,259 | 0 | 2,635 | 1.23% | 1.73% | 0.54% | 1.28% | 1.86% | N/A | 1.63% |
| 2019 | Uintah-Diamond Mtn | 2,450 | 658 | 183 | 597 | 3,791 | 0 | 7,679 | 0.93% | 0.84% | 0.64% | 1.05% | 2.72% | N/A | 1.36% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 93 | 0 | 15 | 4 | 22 | 0 | 133 | 0.77% | N/A | 3.57% | 0.23% | 0.50% | N/A | 0.71% |
| | Blacks Fork | 389 | 215 | 0 | 23 | 389 | 0 | 1,016 | 0.53% | 0.95% | N/A | 0.85% | 0.56% | 0.32% | 0.61% |
| | Buffalo | 226 | 0 | 0 | 295 | 3,039 | 0 | 3,560 | 0.68% | N/A | N/A | 1.14% | 1.02% | 0.00% | 1.00% |
| | Buffalo Connectivity | 137 | 0 | 0 | 242 | 2,399 | 0 | 2,779 | 0.68% | N/A | N/A | 1.91% | 1.14% | N/A | 1.14% |
| | Continental Divide | 363 | 0 | 0 | 1 | 303 | 0 | 668 | 0.43% | N/A | N/A | 0.08% | 0.35% | N/A | 0.39% |
| | Daniel | 2,289 | 0 | 0 | 222 | 2,194 | 8 | 4,714 | 0.98% | 0.04% | N/A | 0.80% | 0.87% | 0.48% | 0.91% |
| | Douglas | 2 | 0 | 0 | 63 | 762 | 0 | 827 | 0.48% | N/A | N/A | 1.38% | 1.23% | N/A | 1.24% |
| | Elk Basin East | 41 | 0 | 35 | 13 | 175 | 54 | 318 | 0.68% | N/A | 0.71% | 0.90% | 0.78% | 6.78% | 0.89% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 77 | 0 | 87 | 0.84% | N/A | N/A | 0.37% | 0.87% | N/A | 0.84% |
| | Fontenelle | 1,460 | 29 | 0 | 90 | 336 | 0 | 1,915 | 0.71% | 0.62% | N/A | 0.74% | 1.07% | N/A | 0.75% |
| | Grass Creek | 214 | 0 | 0 | 52 | 407 | 0 | 673 | 0.26% | N/A | 0.39% | 0.50% | 0.66% | 0.08% | 0.43% |
| | Greater South Pass | 23,380 | 11 | 545 | 2,145 | 7,633 | 92 | 33,805 | 0.67% | 0.51% | 0.50% | 0.75% | 1.04% | 0.93% | 0.73% |
| | Hanna | 2,868 | 0 | 52 | 362 | 3,975 | 16 | 7,274 | 0.94% | N/A | 0.38% | 1.00% | 1.14% | 0.08% | 1.01% |
| | Heart Mountain | 144 | 0 | 22 | 53 | 404 | 0 | 623 | 0.31% | N/A | 0.29% | 0.31% | 0.70% | 0.00% | 0.49% |
| | Hyattville | 488 | 0 | 0 | 113 | 157 | 0 | 758 | 0.44% | N/A | N/A | 0.90% | 0.78% | 0.00% | 0.53% |
| | Jackson | 0 | 306 | 0 | 0 | 37 | 0 | 343 | N/A | 0.67% | 0.00% | 0.45% | 1.51% | 0.13% | 0.71% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | N/A | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,081 | 0 | 81 | 2,007 | 7,156 | 34 | 16,360 | 0.67% | 0.00% | 0.91% | 0.65% | 0.70% | 0.46% | 0.68% |
| | Newcastle | 13 | 670 | 0 | 155 | 943 | 41 | 1,822 | 0.36% | 2.56% | N/A | 2.18% | 1.30% | 16.81% | 1.66% |
| 2019 | North Gillette Connectivity | 264 | 80 | 0 | 40 | 1,016 | 0 | 1,400 | 0.80% | 1.25% | N/A | 0.49% | 1.20% | 0.00% | 1.06% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 24 | 599 | 0 | 51 | 611 | 0 | 1,284 | 0.35% | 1.73% | N/A | 0.68% | 0.84% | N/A | 1.05% |
| | North Glenrock | 214 | 0 | 0 | 107 | 850 | 0 | 1,171 | 0.64% | N/A | N/A | 0.87% | 1.06% | N/A | 0.93% |
| | North Laramie | 41 | 0 | 0 | 78 | 474 | 6 | 600 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 6,487 | 0 | 0 | 327 | 2,104 | 1 | 8,919 | 1.59% | N/A | N/A | 0.71% | 1.36% | 0.11% | 1.47% |
| | Powder | 70 | 0 | 0 | 14 | 0 | 0 | 84 | 0.12% | N/A | N/A | 0.77% | 0.00% | N/A | 0.14% |
| | Sage | 3,626 | 0 | 48 | 438 | 2,171 | 6 | 6,289 | 1.00% | 0.00% | 0.56% | 0.99% | 1.00% | 0.33% | 0.99% |
| | Salt Wells | 1,354 | 0 | 0 | 121 | 622 | 0 | 2,096 | 0.47% | N/A | N/A | 0.52% | 0.76% | N/A | 0.53% |
| | Seedskadee | 378 | 0 | 115 | 0 | 424 | 0 | 916 | 1.80% | N/A | 2.22% | 0.00% | 1.53% | N/A | 1.68% |
| | Shell | 44 | 0 | 0 | 3 | 57 | 0 | 104 | 0.16% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.29% |
| | South Rawlins | 2,750 | 5 | 15 | 747 | 4,454 | 129 | 8,099 | 0.74% | 0.35% | 2.26% | 0.75% | 1.00% | 1.46% | 0.87% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 249 | 2,859 | 0 | 447 | 5,427 | 3 | 8,985 | 0.41% | 1.71% | N/A | 0.81% | 0.96% | 1.48% | 1.06% |
| | Uinta | 977 | 5 | 0 | 23 | 287 | 0 | 1,292 | 0.62% | 2.37% | N/A | 0.51% | 0.39% | 4.02% | 0.55% |
| 2019 | Washakie | 1,879 | 0 | 0 | 360 | 1,036 | 0 | 3,276 | 0.46% | N/A | N/A | 0.58% | 0.60% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **203,665** | **21,887** | **7,577** | **24,534** | **181,419** | **3,357** | **442,438** | **0.60%** | **0.78%** | **0.50%** | **0.71%** | **0.95%** | **0.93%** | **0.73%** |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado | Meeker/White River | 3 | 0 | 0 | 0 | 67 | 25 | 95 | 1.89% | N/A | N/A | N/A | 0.91% | 2.10% | 1.09% |
| | Middle Park | 1,150 | 36 | 0 | 147 | 1,849 | 29 | 3,211 | 2.01% | 1.84% | N/A | 0.96% | 1.84% | 1.05% | 1.81% |
| | North Eagle/South Routt | 435 | 40 | 0 | 8 | 1,522 | 0 | 2,005 | 1.49% | 4.57% | N/A | 0.31% | 2.09% | N/A | 1.90% |
| | North Park | 2,209 | 0 | 231 | 305 | 2,140 | 46 | 4,930 | 2.16% | N/A | 1.19% | 1.43% | 1.85% | 3.06% | 1.89% |
| | Northwest Colorado | 6,729 | 0 | 105 | 1,283 | 7,869 | 191 | 16,177 | 1.29% | N/A | 3.62% | 1.30% | 1.50% | 1.53% | 1.39% |
| 2020 | Parachute/Piceance/Roan | 824 | 0 | 0 | 0 | 2,641 | 36 | 3,501 | 2.18% | N/A | N/A | N/A | 2.42% | 2.36% | 2.36% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho | Idaho Desert Conservation Area - IHMA | 3,200 | 5 | 1,640 | 111 | 559 | 0 | 5,515 | 0.68% | 0.68% | 1.07% | 0.38% | 0.75% | 0.00% | 0.76% |
| | Idaho Desert Conservation Area - PHMA | 3,343 | 0 | 61 | 155 | 638 | 0 | 4,196 | 0.41% | N/A | 0.16% | 0.56% | 0.82% | N/A | 0.44% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 3,662 | 388 | 52 | 283 | 1,855 | 7 | 6,247 | 0.60% | 0.30% | 1.32% | 0.51% | 0.84% | 4.07% | 0.61% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 5,839 | 455 | 678 | 844 | 3,129 | 0 | 10,946 | 0.58% | 0.37% | 0.83% | 0.57% | 0.85% | N/A | 0.63% |
| | Idaho Southern Conservation Area - IHMA | 2,660 | 1,638 | 0 | 171 | 1,736 | 0 | 6,205 | 0.42% | 0.93% | 0.00% | 0.35% | 0.95% | 2.28% | 0.59% |
| | Idaho Southern Conservation Area - PHMA | 2,260 | 642 | 2 | 160 | 1,444 | 0 | 4,507 | 0.45% | 1.14% | 1.26% | 0.45% | 0.77% | 0.43% | 0.57% |
| | Idaho West Owyhee Conservation Area - IHMA | 1,446 | 0 | 0 | 121 | 422 | 0 | 1,989 | 0.37% | N/A | 0.00% | 0.35% | 0.54% | 0.00% | 0.40% |
| 2020 | Idaho West Owyhee Conservation Area - PHMA | 2,596 | 0 | 101 | 263 | 552 | 0 | 3,512 | 0.18% | 0.00% | 0.17% | 0.22% | 0.39% | 0.00% | 0.20% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 1,962 | 604 | 3 | 1,106 | 11,374 | 51 | 15,100 | 1.22% | 0.90% | 1.56% | 0.71% | 1.08% | 0.81% | 1.05% |
| | Northern Montana | 6,757 | 0 | 49 | 1,232 | 5,874 | 0 | 13,913 | 0.47% | N/A | 0.62% | 0.65% | 0.81% | 0.00% | 0.59% |
| | Powder River Basin | 35 | 12 | 5 | 70 | 540 | 0 | 662 | 0.71% | 3.42% | 0.44% | 1.50% | 0.80% | 0.00% | 0.84% |
| | SW Montana Conservation Area | 2,770 | 618 | 185 | 928 | 3,706 | 109 | 8,316 | 0.60% | 0.38% | 0.45% | 0.41% | 0.81% | 0.92% | 0.61% |
| | Wyoming Basin | 719 | 0 | 29 | 172 | 2,515 | 8 | 3,442 | 0.68% | N/A | 1.64% | 1.17% | 1.34% | 0.88% | 1.11% |
| 2020 | Yellowstone Watershed | 3,300 | 9 | 275 | 1,550 | 17,601 | 15 | 22,749 | 0.30% | 2.43% | 0.36% | 0.39% | 0.48% | 0.51% | 0.44% |

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| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada/ California | Black Rock | 437 | 0 | 67 | 0 | 73 | 0 | 576 | 0.18% | N/A | 0.69% | N/A | 0.54% | 0.00% | 0.22% |
| | Butte/Buck/White Pine | 3,877 | 81 | 10 | 0 | 216 | 0 | 4,183 | 0.60% | 0.41% | 0.53% | N/A | 0.89% | N/A | 0.60% |
| | Central Elko | 6,735 | 1,984 | 77 | 2 | 5,757 | 0 | 14,554 | 0.46% | 0.44% | 1.33% | 0.38% | 0.88% | 0.12% | 0.57% |
| | Central Great Basin | 7,394 | 135 | 0 | 0 | 5,178 | 0 | 12,707 | 0.62% | 0.52% | N/A | N/A | 4.07% | N/A | 0.95% |
| | East High Desert | 1,269 | 49 | 10 | 0 | 375 | 0 | 1,704 | 0.56% | 0.33% | 0.31% | 0.39% | 1.08% | 4.29% | 0.61% |
| | Lassen/South Washoe | 2,413 | 0 | 8 | 56 | 255 | 1,246 | 3,978 | 0.35% | N/A | 0.38% | 0.74% | 1.29% | 1.12% | 0.48% |
| | Likely Tables PMU | 110 | 11 | 0 | 28 | 0 | 3 | 151 | 1.15% | 0.52% | N/A | 1.30% | N/A | 1.67% | 1.09% |
| | Lone Willow | 735 | 0 | 0 | 0 | 114 | 0 | 849 | 0.21% | N/A | N/A | N/A | 0.51% | 0.02% | 0.23% |
| | Monitor | 1,429 | 402 | 11 | 0 | 165 | 0 | 2,007 | 0.45% | 0.33% | 1.31% | N/A | 1.19% | N/A | 0.44% |
| | Northeast Elko | 1,786 | 4 | 0 | 1 | 677 | 0 | 2,468 | 0.30% | 0.60% | N/A | 0.18% | 0.83% | 0.47% | 0.37% |
| | Northwest Great Basin (NV) | 4,002 | 0 | 1,146 | 0 | 23 | 703 | 5,874 | 0.37% | 0.00% | 0.23% | 0.01% | 0.74% | 0.79% | 0.35% |
| | Northwest Interior | 598 | 0 | 0 | 0 | 356 | 0 | 954 | 0.34% | N/A | N/A | N/A | 0.65% | N/A | 0.41% |
| | Owyhee | 4,510 | 2,892 | 7 | 0 | 3,296 | 0 | 10,705 | 0.34% | 1.24% | 0.50% | N/A | 0.90% | 0.03% | 0.56% |
| | Pueblo Range | 26 | 0 | 0 | 0 | 14 | 0 | 40 | 0.36% | N/A | N/A | N/A | 3.24% | 0.39% | 0.53% |
| | Ruby | 3,141 | 354 | 109 | 0 | 2,343 | 0 | 5,947 | 0.74% | 0.43% | 0.86% | N/A | 0.84% | 0.00% | 0.74% |
| | Smith/Reese | 1,202 | 141 | 54 | 0 | 123 | 0 | 1,519 | 0.48% | 0.43% | 1.42% | N/A | 0.86% | N/A | 0.50% |
| | Southeastern Nevada | 1,716 | 7 | 5 | 1 | 230 | 0 | 1,958 | 0.55% | 0.48% | 1.25% | 4.21% | 0.97% | 0.00% | 0.58% |
| 2020 | Western Pershing | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 0.08% | N/A | N/A | N/A | 0.01% | N/A | 0.07% |

| State | BSU ID | Disturbance Estimate by SMA - 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres PHMAs/IHMAs Disturbed within BSUs | | | | | | | % PHMAs/IHMAs Disturbed within BSUs | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1,684 | 23 | 0 | 2 | 3,380 | 0 | 5,089 | 1.49% | 0.79% | 0.00% | 81.63% | 1.53% | N/A | 1.51% |
| | Beatys | 2,906 | 0 | 1,034 | 64 | 378 | 0 | 4,382 | 0.54% | N/A | 0.42% | 0.42% | 0.85% | 0.19% | 0.52% |
| | Brothers/N Wagontire | 2,910 | 307 | 0 | 182 | 1,017 | 0 | 4,417 | 1.52% | 2.35% | N/A | 1.27% | 1.36% | N/A | 1.51% |
| | Bully Creek | 1,448 | 0 | 0 | 2 | 713 | 0 | 2,163 | 0.69% | N/A | 7.15% | 0.41% | 1.01% | N/A | 0.77% |
| | Burns | 142 | 53 | 0 | 0 | 131 | 0 | 326 | 0.65% | 1.15% | N/A | 0.00% | 1.39% | N/A | 0.91% |
| | Cow Lakes | 1,647 | 0 | 0 | 6 | 716 | 0 | 2,369 | 0.88% | N/A | N/A | 0.24% | 1.20% | 0.00% | 0.95% |
| | Cow Valley | 755 | 0 | 0 | 27 | 3,308 | 0 | 4,090 | 0.85% | N/A | N/A | 0.42% | 1.21% | N/A | 1.11% |
| | Crowley | 2,756 | 0 | 0 | 167 | 844 | 0 | 3,767 | 0.71% | N/A | N/A | 0.71% | 1.05% | N/A | 0.77% |
| | Drewsey | 1,793 | 248 | 0 | 10 | 1,495 | 0 | 3,545 | 0.88% | 1.01% | 0.00% | 0.56% | 1.08% | N/A | 0.96% |
| | Dry Valley/Jack Mountain | 3,155 | 0 | 0 | 17 | 179 | 0 | 3,351 | 0.74% | N/A | N/A | 0.78% | 0.98% | N/A | 0.75% |
| | Folly Farm/Saddle Butte | 911 | 0 | 0 | 113 | 224 | 0 | 1,247 | 0.45% | N/A | N/A | 0.46% | 0.97% | N/A | 0.50% |
| | Louse Canyon | 3,586 | 0 | 110 | 11 | 137 | 0 | 3,844 | 0.56% | N/A | 0.58% | 0.15% | 1.35% | 4.17% | 0.57% |
| | Paulina/12 Mile/Misery Flat | 1,177 | 255 | 0 | 110 | 2,253 | 0 | 3,794 | 0.79% | 1.58% | N/A | 0.79% | 0.89% | N/A | 0.88% |
| | Picture Rock | 461 | 3 | 0 | 7 | 78 | 3 | 552 | 1.25% | 0.21% | N/A | 3.41% | 2.17% | 0.58% | 1.30% |
| | Pueblos/S Steens | 763 | 0 | 0 | 0 | 654 | 0 | 1,417 | 0.53% | N/A | N/A | N/A | 1.00% | N/A | 0.68% |
| | Soldier Creek | 1,520 | 0 | 3 | 161 | 191 | 0 | 1,874 | 0.63% | N/A | 6.26% | 0.46% | 0.93% | 0.00% | 0.63% |
| | Steens | 1,005 | 0 | 79 | 9 | 446 | 0 | 1,538 | 0.67% | N/A | 2.63% | 1.46% | 1.41% | N/A | 0.83% |
| | Trout Creeks | 2,439 | 0 | 0 | 0 | 403 | 0 | 2,842 | 0.67% | N/A | N/A | 0.00% | 1.38% | 0.04% | 0.72% |
| | Tucker Hill | 85 | 1 | 0 | 0 | 140 | 0 | 227 | 0.52% | 0.44% | N/A | N/A | 0.94% | N/A | 0.72% |
| 2020 | Warners | 2,538 | 17 | 0 | 65 | 879 | 0 | 3,499 | 1.01% | 1.77% | N/A | 0.90% | 1.23% | N/A | 1.06% |

| State | BSU ID | Disturbance Estimate by SMA - 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres PHMAs/IHMAs Disturbed within BSUs | | | | | | | % PHMAs/IHMAs Disturbed within BSUs | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Utah | Bald Hills | 2,457 | 0 | 0 | 260 | 611 | 0 | 3,328 | 0.95% | N/A | N/A | 0.91% | 1.60% | N/A | 1.02% |
| | Box Elder | 2,520 | 0 | 0 | 334 | 3,698 | 0 | 6,552 | 0.57% | 0.10% | N/A | 0.54% | 0.58% | 7.99% | 0.58% |
| | Carbon | 794 | 98 | 0 | 1,116 | 3,706 | 0 | 5,714 | 1.82% | 1.24% | N/A | 2.90% | 2.18% | N/A | 2.20% |
| | Emery | 0 | 678 | 0 | 0 | 32 | 0 | 709 | 0.23% | 0.83% | N/A | 0.00% | 0.77% | N/A | 0.83% |
| | Hamlin Valley | 541 | 0 | 0 | 51 | 260 | 0 | 852 | 0.53% | N/A | N/A | 0.29% | 1.06% | 0.22% | 0.59% |
| | Ibapah | 333 | 0 | 202 | 20 | 78 | 0 | 633 | 0.69% | N/A | 0.72% | 0.55% | 0.86% | 3.70% | 0.71% |
| | Panguitch | 2,274 | 523 | 0 | 313 | 1,990 | 0 | 5,100 | 1.39% | 0.88% | N/A | 1.02% | 2.20% | N/A | 1.48% |
| | Parker Mtn | 2,535 | 1,683 | 12 | 1,557 | 1,369 | 0 | 7,155 | 1.18% | 0.56% | 1.29% | 0.92% | 2.32% | N/A | 0.96% |
| | Raft River | 0 | 328 | 0 | 1 | 51 | 0 | 380 | 0.24% | 0.65% | N/A | 0.15% | 0.32% | N/A | 0.57% |
| | Rich County | 1,193 | 60 | 125 | 632 | 8,477 | 0 | 10,487 | 0.71% | 0.37% | 7.39% | 0.86% | 1.12% | 0.86% | 1.03% |
| | Sheeprocks | 3,115 | 988 | 0 | 401 | 1,498 | 0 | 6,003 | 0.82% | 1.06% | 0.00% | 0.76% | 1.25% | N/A | 0.93% |
| | Strawberry | 0 | 708 | 5 | 662 | 1,256 | 0 | 2,631 | N/A | 1.73% | 0.54% | 1.28% | 1.85% | N/A | 1.63% |
| 2020 | Uintah-Diamond Mtn | 2,459 | 659 | 182 | 598 | 3,805 | 1 | 7,704 | 0.94% | 0.84% | 0.64% | 1.05% | 2.73% | 1.53% | 1.36% |

| State | BSU ID | Disturbance Estimate by SMA - 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres PHMAs/IHMAs Disturbed within BSUs | | | | | | | % PHMAs/IHMAs Disturbed within BSUs | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 93 | 0 | 15 | 4 | 22 | 0 | 133 | 0.77% | N/A | 3.57% | 0.23% | 0.50% | 0.00% | 0.71% |
| | Blacks Fork | 389 | 215 | 0 | 23 | 389 | 0 | 1,016 | 0.53% | 0.95% | N/A | 0.85% | 0.56% | 0.32% | 0.61% |
| | Buffalo | 207 | 0 | 0 | 283 | 3,076 | 0 | 3,566 | 0.62% | N/A | N/A | 1.09% | 1.03% | 0.00% | 1.00% |
| | Buffalo Connectivity | 127 | 0 | 0 | 241 | 2,410 | 0 | 2,779 | 0.63% | N/A | N/A | 1.90% | 1.14% | N/A | 1.14% |
| | Continental Divide | 363 | 0 | 0 | 1 | 303 | 0 | 668 | 0.43% | N/A | N/A | 0.08% | 0.35% | N/A | 0.39% |
| | Daniel | 2,285 | 0 | 0 | 223 | 2,189 | 8 | 4,705 | 0.98% | 0.04% | N/A | 0.80% | 0.87% | 0.48% | 0.91% |
| | Douglas | 2 | 0 | 0 | 65 | 756 | 0 | 823 | 0.48% | N/A | N/A | 1.42% | 1.22% | 21.26% | 1.23% |
| | Elk Basin East | 41 | 0 | 35 | 13 | 175 | 54 | 318 | 0.68% | N/A | 0.71% | 0.90% | 0.78% | 6.78% | 0.89% |
| | Elk Basin West | 8 | 0 | 0 | 2 | 77 | 0 | 87 | 0.84% | N/A | N/A | 0.37% | 0.87% | 0.00% | 0.84% |
| | Fontenelle | 1,460 | 29 | 0 | 90 | 336 | 0 | 1,915 | 0.71% | 0.62% | N/A | 0.74% | 1.07% | N/A | 0.75% |
| | Grass Creek | 214 | 0 | 0 | 52 | 407 | 0 | 673 | 0.26% | N/A | 0.40% | 0.50% | 0.66% | 0.08% | 0.43% |
| | Greater South Pass | 23,209 | 11 | 545 | 2,128 | 7,528 | 92 | 33,512 | 0.67% | 0.51% | 0.50% | 0.75% | 1.03% | 0.93% | 0.73% |
| | Hanna | 2,839 | 0 | 52 | 362 | 3,937 | 15 | 7,206 | 0.93% | N/A | 0.38% | 1.00% | 1.12% | 0.08% | 1.00% |
| | Heart Mountain | 144 | 0 | 22 | 53 | 404 | 0 | 623 | 0.31% | N/A | 0.29% | 0.31% | 0.70% | 0.00% | 0.49% |
| | Hyattville | 488 | 0 | 0 | 113 | 157 | 0 | 758 | 0.44% | N/A | N/A | 0.90% | 0.78% | 0.00% | 0.53% |
| | Jackson | 0 | 306 | 0 | 0 | 37 | 0 | 343 | N/A | 0.67% | 0.00% | 0.49% | 1.51% | 0.13% | 0.71% |
| | Little Mountain | 206 | 0 | 0 | 15 | 65 | 0 | 286 | 0.54% | 0.97% | 0.01% | 0.40% | 1.04% | N/A | 0.60% |
| | Natrona | 7,116 | 0 | 81 | 2,007 | 7,151 | 34 | 16,390 | 0.67% | 0.00% | 0.91% | 0.65% | 0.70% | 0.46% | 0.68% |
| | Newcastle | 590 | 93 | 0 | 147 | 934 | 41 | 1,804 | 2.19% | 3.38% | N/A | 2.06% | 1.29% | 16.82% | 1.65% |
| 2020 | North Gillette Connectivity | 333 | 12 | 0 | 40 | 1,014 | 0 | 1,399 | 0.88% | 0.71% | N/A | 0.49% | 1.20% | 0.00% | 1.06% |

| State | BSU ID | Disturbance Estimate by SMA - 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres PHMAs/IHMAs Disturbed within BSUs | | | | | | | % PHMAs/IHMAs Disturbed within BSUs | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 446 | 177 | 0 | 51 | 601 | 0 | 1,275 | 1.47% | 1.60% | N/A | 0.68% | 0.82% | N/A | 1.05% |
| | North Glenrock | 213 | 0 | 0 | 107 | 858 | 0 | 1,178 | 0.64% | N/A | N/A | 0.87% | 1.07% | N/A | 0.94% |
| | North Laramie | 41 | 0 | 0 | 78 | 474 | 6 | 600 | 0.18% | N/A | N/A | 0.52% | 0.30% | 0.08% | 0.29% |
| | Oregon Basin | 6,477 | 0 | 0 | 327 | 2,100 | 1 | 8,906 | 1.59% | N/A | N/A | 0.71% | 1.35% | 0.11% | 1.46% |
| | Powder | 60 | 0 | 0 | 14 | 0 | 0 | 74 | 0.10% | N/A | N/A | 0.77% | 0.00% | N/A | 0.12% |
| | Sage | 3,621 | 0 | 48 | 438 | 2,171 | 6 | 6,284 | 1.00% | 0.00% | 0.56% | 0.99% | 1.00% | 0.33% | 0.99% |
| | Salt Wells | 1,349 | 0 | 0 | 121 | 613 | 0 | 2,083 | 0.47% | N/A | N/A | 0.52% | 0.75% | N/A | 0.53% |
| | Seedskadee | 378 | 0 | 115 | 0 | 424 | 0 | 916 | 1.80% | N/A | 2.22% | 0.00% | 1.53% | N/A | 1.68% |
| | Shell | 44 | 0 | 0 | 3 | 57 | 0 | 104 | 0.16% | 0.00% | N/A | 0.17% | 1.05% | N/A | 0.29% |
| | South Rawlins | 2,743 | 5 | 14 | 735 | 4,422 | 129 | 8,047 | 0.74% | 0.35% | 2.12% | 0.74% | 0.99% | 1.46% | 0.87% |
| | Thermopolis | 13 | 0 | 0 | 0 | 48 | 0 | 61 | 0.23% | N/A | 0.51% | N/A | 0.79% | N/A | 0.51% |
| | Thunder Basin | 1,852 | 1,248 | 0 | 446 | 5,510 | 3 | 9,059 | 1.24% | 1.59% | N/A | 0.81% | 0.98% | 1.48% | 1.07% |
| | Uinta | 977 | 5 | 0 | 23 | 287 | 0 | 1,292 | 0.62% | 2.38% | N/A | 0.51% | 0.39% | 4.31% | 0.55% |
| 2020 | Washakie | 1,879 | 0 | 0 | 360 | 1,036 | 0 | 3,276 | 0.46% | N/A | N/A | 0.58% | 0.60% | N/A | 0.51% |
| | **GRAND TOTAL ALL STATES** | **205,394** | **19,234** | **7,598** | **24,455** | **181,594** | **2,863** | **441,139** | **0.60%** | **0.72%** | **0.50%** | **0.69%** | **0.94%** | **0.93%** | **0.72%** |

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# Appendix 4: Change in Disturbance by BSU and Surface Management Agency

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2015 2016 | Meeker/White River | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | N/A | N/A | N/A | 0.05% | 0.00% | 0.04% |
| | Middle Park | 2 | 0 | 0 | 31 | 25 | 0 | 58 | 0.00% | 0.00% | N/A | 0.20% | 0.02% | 0.00% | 0.03% |
| | North Eagle/South Routt | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.01% |
| | North Park | -10 | 0 | 0 | -4 | 20 | 0 | 6 | -0.01% | N/A | 0.00% | -0.02% | 0.02% | 0.00% | 0.00% |
| | Northwest Colorado | -3 | 0 | 0 | -1 | 35 | 0 | 31 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Parachute/Piceance/Roan | 13 | 0 | 0 | 0 | -3 | 10 | 20 | 0.03% | N/A | N/A | N/A | 0.00% | 0.68% | 0.01% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2015 2016 | Idaho Desert Conservation Area - IHMA | 8 | 2 | 1 | 0 | 15 | 0 | 26 | 0.00% | 0.33% | 0.00% | 0.00% | 0.02% | 0.00% | 0.00% |
| | Idaho Desert Conservation Area - PHMA | -2 | 0 | 0 | -1 | 9 | 0 | 5 | 0.00% | N/A | 0.00% | -0.01% | 0.01% | N/A | 0.00% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 132 | 28 | 2 | 6 | 82 | 0 | 251 | 0.02% | 0.02% | 0.04% | 0.01% | 0.04% | -0.04% | 0.02% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 94 | 23 | 0 | -2 | 26 | 0 | 140 | 0.01% | 0.02% | 0.00% | 0.00% | 0.01% | N/A | 0.01% |
| | Idaho Southern Conservation Area - IHMA | 7 | 7 | 0 | 3 | 12 | 0 | 29 | 0.00% | 0.00% | 0.00% | 0.01% | 0.01% | N/A | 0.00% |
| | Idaho Southern Conservation Area - PHMA | 63 | -37 | 0 | 5 | 12 | 0 | 43 | 0.01% | -0.07% | 0.00% | 0.01% | 0.01% | N/A | 0.01% |
| | Idaho West Owyhee Conservation Area - IHMA | 2 | 0 | 0 | 0 | 4 | 0 | 6 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | 6 | 0 | 0 | 0 | 5 | 0 | 11 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana 2015 2016 | Dakotas | -16 | 6 | 0 | 0 | 64 | 0 | 54 | -0.01% | 0.01% | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Northern Montana | -2 | 0 | 0 | 0 | 1 | 0 | -2 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Powder River Basin | 0 | 0 | 0 | -1 | 3 | 0 | 2 | 0.00% | 0.00% | 0.00% | -0.02% | 0.00% | N/A | 0.00% |
| | SW Montana Conservation Area | 5 | 0 | 0 | 10 | 56 | 1 | 73 | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | 0.01% | 0.01% |
| | Wyoming Basin | -5 | 0 | 0 | 0 | -7 | 0 | -12 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | -0.05% | 0.00% |
| | Yellowstone Watershed | 11 | 1 | -2 | -3 | 287 | 0 | 293 | 0.00% | 0.32% | 0.00% | 0.00% | 0.01% | 0.00% | 0.01% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada 2015 2016 | Black Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | N/A | 0.00% | 0.00% |
| | Butte/Buck/White Pine | 28 | 0 | 0 | 0 | -2 | 0 | 27 | 0.00% | 0.00% | 0.00% | N/A | -0.01% | N/A | 0.00% |
| | Central Elko | -39 | 0 | 0 | 0 | 562 | 0 | 524 | 0.00% | 0.00% | 0.00% | 0.00% | 0.09% | N/A | 0.02% |
| | Central Great Basin | 316 | 0 | 0 | 0 | 649 | 0 | 966 | 0.03% | 0.00% | N/A | N/A | 0.51% | N/A | 0.07% |
| | East High Desert | 4 | 0 | 0 | 0 | 2 | 0 | 6 | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | N/A | 0.00% |
| | Lassen/South Washoe | 1 | 0 | 0 | 0 | 0 | 4 | 5 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 5 | 0 | 0 | 0 | 0 | 6 | 11 | 0.00% | N/A | N/A | N/A | 0.00% | 0.03% | 0.00% |
| | Monitor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Northeast Elko | 1 | -1 | 0 | 0 | 7 | 0 | 7 | 0.00% | -0.10% | N/A | 0.00% | 0.01% | N/A | 0.00% |
| | Northwest Great Basin | 12 | 0 | 0 | 0 | 0 | 24 | 37 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.03% | 0.00% |
| | Northwest Interior | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Owyhee | 77 | 23 | 1 | 0 | 169 | 0 | 270 | 0.01% | 0.01% | 0.06% | N/A | 0.05% | N/A | 0.01% |
| | Pueblo Range | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | N/A | 0.00% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 672 | 18 | 1 | 0 | 143 | 0 | 834 | 0.16% | 0.02% | 0.01% | N/A | 0.05% | 0.00% | 0.10% |
| | Smith/Reese | 1 | 0 | 0 | 0 | 3 | 0 | 4 | 0.00% | 0.00% | 0.00% | N/A | 0.02% | N/A | 0.00% |
| | Southeastern Nevada | -2 | 0 | 0 | 0 | 6 | 0 | 3 | 0.00% | 0.00% | 0.00% | 0.00% | 0.02% | N/A | 0.00% |
| | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 1 | 0 | 0 | 0 | 8 | 0 | 9 | 0.00% | 0.00% | 0.00% | 7.37% | 0.00% | N/A | 0.00% |
| | Beatys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Brothers/N Wagontire | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.00% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 21 | 0 | 21 | 0.00% | N/A | N/A | 0.00% | 0.01% | N/A | 0.01% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | 0.00% | 0.00% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| 2015 | Tucker Hill | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | 0.00% | N/A | N/A | 0.02% | N/A | 0.01% |
| 2016 | Warners | 1 | 0 | 0 | 0 | 4 | 0 | 5 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Blacks Fork | -1 | 0 | 0 | 0 | -1 | 0 | -2 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Buffalo | 20 | 0 | 0 | 10 | -8 | 0 | 22 | 0.06% | N/A | N/A | 0.04% | 0.00% | 0.00% | 0.01% |
| | Buffalo Connectivity | 7 | 0 | 0 | -9 | 286 | 0 | 285 | 0.04% | N/A | N/A | -0.07% | 0.14% | N/A | 0.12% |
| | Continental Divide | 0 | 0 | 0 | 0 | -15 | 0 | -15 | 0.00% | N/A | N/A | 0.00% | -0.02% | N/A | -0.01% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | 764 | 0 | 0 | 42 | 260 | 2 | 1,067 | 0.33% | 0.00% | N/A | 0.15% | 0.10% | 0.09% | 0.21% |
| | Douglas | 0 | 0 | 0 | 1 | -46 | 0 | -44 | 0.00% | N/A | N/A | 0.03% | -0.07% | N/A | -0.07% |
| | Elk Basin East | 0 | 0 | 0 | 0 | -5 | 0 | -5 | 0.00% | N/A | 0.00% | 0.00% | -0.02% | 0.01% | -0.01% |
| | Elk Basin West | 0 | 0 | 0 | 0 | -5 | 0 | -5 | 0.00% | N/A | N/A | 0.00% | -0.06% | N/A | -0.05% |
| | Fontenelle | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 0.00% | 0.00% | N/A | 0.00% | -0.01% | N/A | 0.00% |
| | Grass Creek | 1 | 0 | 0 | 2 | 20 | 0 | 23 | 0.00% | N/A | 0.00% | 0.02% | 0.03% | 0.00% | 0.02% |
| | Greater South Pass | 2,410 | 4 | 3 | 136 | 234 | 2 | 2,788 | 0.07% | 0.18% | 0.00% | 0.05% | 0.03% | 0.02% | 0.06% |
| | Hanna | 0 | 0 | -4 | -12 | 4 | 0 | -11 | 0.00% | N/A | -0.03% | -0.03% | 0.00% | 0.00% | 0.00% |
| | Heart Mountain | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Hyattville | 4 | 0 | 0 | 26 | 1 | 0 | 31 | 0.00% | N/A | N/A | 0.21% | 0.00% | 0.00% | 0.02% |
| | Jackson | 0 | 1 | 0 | 0 | 2 | 0 | 3 | N/A | 0.00% | 0.00% | 0.00% | 0.08% | 0.00% | 0.01% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| 2015 | Natrona | -32 | 0 | 0 | 23 | 51 | 0 | 42 | 0.00% | 0.00% | 0.00% | 0.01% | 0.01% | 0.00% | 0.00% |
| | Newcastle | 2 | 7 | 0 | 14 | 293 | 0 | 315 | 0.06% | 0.03% | N/A | 0.19% | 0.40% | -0.04% | 0.29% |
| 2016 | North Gillete Connectivity | -22 | 0 | 0 | 0 | -36 | 0 | -58 | -0.07% | 0.00% | N/A | 0.00% | -0.04% | 0.00% | -0.04% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| **Wyoming** *(continued)* | North Gillette | 2 | -5 | 0 | 0 | 17 | 0 | 14 | 0.04% | -0.02% | N/A | 0.00% | 0.02% | N/A | 0.01% |
| | North Glenrock | 3 | 0 | 0 | -1 | 31 | 0 | 33 | 0.01% | N/A | N/A | -0.01% | 0.04% | N/A | 0.03% |
| | North Laramie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | -16 | 0 | 0 | 0 | 66 | 0 | 50 | 0.00% | N/A | N/A | 0.00% | 0.04% | 0.00% | 0.01% |
| | Powder | -2 | 0 | 0 | 0 | 0 | 0 | -2 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Sage | -8 | 0 | 1 | 0 | -9 | 0 | -16 | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Salt Wells | -34 | 0 | 0 | 4 | 7 | 0 | -24 | -0.01% | N/A | N/A | 0.02% | 0.01% | N/A | -0.01% |
| | Seedskadee | 0 | 0 | 0 | 0 | -5 | 0 | -5 | 0.00% | N/A | 0.00% | 0.00% | -0.02% | N/A | -0.01% |
| | Shell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | South Rawlins | 46 | 0 | 0 | 11 | 147 | -2 | 202 | 0.01% | 0.01% | -0.01% | 0.01% | 0.03% | -0.02% | 0.02% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2015 | Thunder Basin | -9 | 2 | 0 | -19 | -64 | 0 | -91 | -0.01% | 0.00% | N/A | -0.03% | -0.01% | -0.05% | -0.01% |
| | Uinta | -7 | 0 | 0 | 0 | 8 | 0 | 1 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | 0.00% | 0.00% |
| 2016 | Washakie | -4 | 0 | 0 | 0 | 16 | 0 | 12 | 0.00% | N/A | N/A | 0.00% | 0.01% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **4,715** | **76** | **19** | **296** | **5,666** | **46** | **10,816** | **0.01%** | **0.00%** | **0.00%** | **0.01%** | **0.03%** | **0.01%** | **0.02%** |

| State | BSU ID | 1 year Change by SMA from 2016 to 2017 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2016 2017 | Meeker/White River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | 0.00% | 0.00% |
| | Middle Park | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | North Eagle/South Routt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | North Park | -12 | 0 | 0 | 2 | 19 | 0 | 9 | -0.01% | N/A | 0.00% | 0.01% | 0.02% | 0.00% | 0.00% |
| | Northwest Colorado | 18 | 0 | 0 | 6 | 44 | 0 | 68 | 0.00% | N/A | 0.00% | 0.01% | 0.01% | 0.00% | 0.01% |
| | Parachute/Piceance/Roan | 4 | 0 | 0 | 0 | 144 | 0 | 147 | 0.01% | N/A | N/A | N/A | 0.13% | 0.00% | 0.10% |

| State | BSU ID | 1 year Change by SMA from 2016 to 2017 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2016 2017 | Idaho Desert Conservation Area - IHMA | 8 | 0 | 26 | 0 | 15 | 0 | 50 | 0.00% | -0.04% | 0.02% | 0.00% | 0.02% | 0.00% | 0.01% |
| | Idaho Desert Conservation Area - PHMA | 0 | 0 | -4 | 0 | 0 | 0 | -3 | 0.00% | N/A | -0.01% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 17 | 6 | 0 | 1 | 67 | 0 | 91 | 0.00% | 0.00% | 0.00% | 0.00% | 0.03% | -0.02% | 0.01% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 2 | 0 | -7 | 2 | 32 | 0 | 28 | 0.00% | 0.00% | -0.01% | 0.00% | 0.01% | N/A | 0.00% |
| | Idaho Southern Conservation Area - IHMA | -7 | 22 | 0 | 0 | 0 | 0 | 15 | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - PHMA | -1 | 0 | 0 | 0 | 7 | 0 | 5 | 0.00% | 0.00% | 0.06% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - IHMA | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2016 to 2017 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 52 | -1 | 0 | 9 | 223 | 1 | 285 | 0.03% | 0.00% | 0.00% | 0.01% | 0.02% | 0.01% | 0.02% |
| | Northern Montana | -391 | 0 | -1 | -16 | -221 | 0 | -629 | -0.03% | N/A | -0.01% | -0.01% | -0.03% | 0.00% | -0.03% |
| | Powder River Basin | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | SW Montana Conservation Area | 27 | 90 | 0 | 11 | 7 | 0 | 135 | 0.01% | 0.06% | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% |
| 2016 | Wyoming Basin | 8 | 0 | 0 | 1 | 60 | 0 | 69 | 0.01% | N/A | 0.00% | 0.01% | 0.03% | 0.00% | 0.02% |
| 2017 | Yellowstone Watershed | 10 | 0 | 52 | -22 | -72 | 0 | -32 | 0.00% | 0.00% | 0.07% | -0.01% | 0.00% | 0.00% | 0.00% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada | Black Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | N/A | 0.00% | 0.00% |
| | Butte/Buck/White Pine | -68 | 0 | 0 | 0 | -21 | 0 | -89 | -0.01% | 0.00% | 0.00% | N/A | -0.09% | N/A | -0.01% |
| | Central Elko | -3 | 3 | 0 | 0 | 25 | 0 | 25 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Central Great Basin | 61 | 37 | 0 | 0 | 53 | 0 | 151 | 0.01% | 0.14% | N/A | N/A | 0.04% | N/A | 0.01% |
| | East High Desert | -5 | 0 | 0 | 0 | -4 | 0 | -8 | 0.00% | 0.00% | 0.00% | 0.00% | -0.01% | N/A | 0.00% |
| | Lassen/South Washoe | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | 0.00% | 0.00% |
| | Monitor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Northeast Elko | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Northwest Great Basin | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Northwest Interior | 1 | 0 | 0 | 0 | 16 | 0 | 17 | 0.00% | N/A | N/A | N/A | 0.03% | N/A | 0.01% |
| | Owyhee | 40 | 18 | 0 | 0 | 31 | 0 | 89 | 0.00% | 0.01% | 0.00% | N/A | 0.01% | N/A | 0.00% |
| | Pueblo Range | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | N/A | 0.00% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 96 | 0 | 0 | 0 | 19 | 0 | 114 | 0.02% | 0.00% | 0.00% | N/A | 0.01% | 0.00% | 0.01% |
| | Smith/Reese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2016 | Southeastern Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| 2017 | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 5 | 0 | 0 | 0 | 6 | 0 | 11 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Beatys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Brothers/N Wagontire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0.00% | 0.01% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| 2016 | Tucker Hill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | N/A | 0.00% | N/A | 0.00% |
| 2017 | Warners | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Blacks Fork | 5 | 1 | 0 | 0 | 12 | 0 | 18 | 0.01% | 0.00% | N/A | 0.00% | 0.02% | 0.00% | 0.01% |
| | Buffalo | 0 | 0 | 0 | 5 | -45 | 0 | -41 | 0.00% | N/A | N/A | 0.02% | -0.02% | 0.00% | -0.01% |
| | Buffalo Connectivity | 4 | 0 | 0 | -51 | 75 | 0 | 28 | 0.02% | N/A | N/A | -0.40% | 0.04% | N/A | 0.01% |
| | Continental Divide | 5 | 0 | 0 | 0 | -25 | 0 | -20 | 0.01% | N/A | N/A | 0.00% | -0.03% | N/A | -0.01% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | 24 | 0 | 0 | 0 | 15 | 0 | 39 | 0.01% | 0.00% | N/A | 0.00% | 0.01% | 0.00% | 0.01% |
| | Douglas | 0 | 0 | 0 | 0 | 58 | 0 | 58 | 0.07% | N/A | N/A | 0.00% | 0.09% | N/A | 0.09% |
| | Elk Basin East | 3 | 0 | 12 | 0 | 7 | 3 | 26 | 0.06% | N/A | 0.24% | 0.00% | 0.03% | 0.41% | 0.07% |
| | Elk Basin West | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.00% | N/A | N/A | 0.00% | 0.02% | N/A | 0.02% |
| | Fontenelle | 13 | 0 | 0 | 0 | 13 | 0 | 26 | 0.01% | 0.00% | N/A | 0.00% | 0.04% | N/A | 0.01% |
| | Grass Creek | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 0.00% | N/A | 0.00% | -0.02% | 0.00% | 0.00% | 0.00% |
| | Greater South Pass | 629 | 0 | -4 | 38 | 266 | 0 | 929 | 0.02% | 0.00% | 0.00% | 0.01% | 0.04% | 0.00% | 0.02% |
| | Hanna | 1 | 0 | 0 | -2 | -39 | -1 | -41 | 0.00% | N/A | 0.00% | -0.01% | -0.01% | 0.00% | -0.01% |
| | Heart Mountain | 6 | 0 | 3 | 3 | 44 | 0 | 55 | 0.01% | N/A | 0.04% | 0.02% | 0.08% | 0.00% | 0.04% |
| | Hyattville | 2 | 0 | 0 | 0 | -13 | 0 | -11 | 0.00% | N/A | N/A | 0.00% | -0.07% | 0.00% | -0.01% |
| | Jackson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| 2016 | Natrona | -20 | 0 | 0 | -9 | 10 | 1 | -18 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | 0.00% |
| | Newcastle | 0 | -10 | 0 | -6 | -2 | 0 | -18 | 0.00% | -0.04% | N/A | -0.08% | 0.00% | 0.04% | -0.02% |
| 2017 | North Gillete Connectivity | 15 | 0 | 0 | 0 | 5 | 0 | 20 | 0.05% | 0.00% | N/A | 0.00% | 0.01% | 0.00% | 0.02% |

| State | BSU ID | 1 year Change by SMA from 2016 to 2017 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 0 | 12 | 0 | 0 | 0 | 0 | 12 | 0.00% | 0.04% | N/A | 0.00% | 0.00% | N/A | 0.01% |
| | North Glenrock | 4 | 0 | 0 | 14 | 7 | 0 | 24 | 0.01% | N/A | N/A | 0.11% | 0.01% | N/A | 0.02% |
| | North Laramie | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | 471 | 0 | 0 | 25 | 67 | 0 | 563 | 0.12% | N/A | N/A | 0.05% | 0.04% | 0.00% | 0.09% |
| | Powder | -4 | 0 | 0 | 0 | 0 | 0 | -4 | -0.01% | N/A | N/A | 0.00% | 0.00% | N/A | -0.01% |
| | Sage | 7 | 0 | 0 | -2 | -26 | 0 | -21 | 0.00% | 0.00% | 0.00% | -0.01% | -0.01% | 0.00% | 0.00% |
| | Salt Wells | 100 | 0 | 0 | 17 | 103 | 0 | 220 | 0.03% | N/A | N/A | 0.07% | 0.13% | N/A | 0.06% |
| | Seedskadee | 22 | 0 | 0 | 0 | 20 | 0 | 41 | 0.10% | N/A | 0.00% | 0.00% | 0.07% | N/A | 0.08% |
| | Shell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | South Rawlins | -4 | 0 | 1 | 12 | 11 | 0 | 20 | 0.00% | 0.00% | 0.15% | 0.01% | 0.00% | 0.00% | 0.00% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2016 | Thunder Basin | 0 | 54 | 0 | 1 | -5 | 0 | 50 | 0.00% | 0.03% | N/A | 0.00% | 0.00% | 0.00% | 0.01% |
| | Uinta | 11 | 0 | 0 | 0 | 3 | 0 | 14 | 0.01% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.01% |
| 2017 | Washakie | 1 | 0 | 0 | 6 | 0 | 0 | 6 | 0.00% | N/A | N/A | 0.01% | 0.00% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **1,199** | **273** | **79** | **29** | **1,649** | **7** | **3,237** | **0.00%** | **0.01%** | **0.01%** | **0.00%** | **0.01%** | **0.00%** | **0.01%** |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2017 2018 | Meeker/White River | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.00% | N/A | N/A | N/A | 0.03% | 0.00% | 0.03% |
| | Middle Park | 0 | 0 | 0 | 0 | -7 | 0 | -7 | 0.00% | 0.00% | N/A | 0.00% | -0.01% | 0.00% | 0.00% |
| | North Eagle/South Routt | -4 | 0 | 0 | -5 | -19 | 0 | -27 | -0.01% | 0.02% | N/A | -0.18% | -0.03% | N/A | -0.03% |
| | North Park | -8 | 0 | 0 | -5 | -4 | 0 | -18 | -0.01% | N/A | 0.00% | -0.02% | 0.00% | 0.00% | -0.01% |
| | Northwest Colorado | -63 | 0 | 0 | -26 | -116 | -1 | -206 | -0.01% | N/A | 0.00% | -0.03% | -0.02% | -0.01% | -0.02% |
| | Parachute/Piceance/Roan | -5 | 0 | 0 | 0 | -30 | 0 | -34 | -0.01% | N/A | N/A | N/A | -0.03% | 0.00% | -0.02% |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2017 2018 | Idaho Desert Conservation Area - IHMA | 11 | 0 | 0 | 12 | 13 | 0 | 37 | 0.00% | 0.00% | 0.00% | 0.04% | 0.02% | 0.00% | 0.01% |
| | Idaho Desert Conservation Area - PHMA | -77 | 0 | 0 | -14 | 48 | 0 | -43 | -0.01% | N/A | 0.00% | -0.05% | 0.06% | N/A | 0.00% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | 0.00% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - IHMA | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - PHMA | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - IHMA | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana 2017 2018 | Dakotas | 0 | 4 | 0 | -31 | -91 | -1 | -119 | 0.00% | 0.01% | 0.00% | -0.02% | -0.01% | -0.02% | -0.01% |
| | Northern Montana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Powder River Basin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | SW Montana Conservation Area | 17 | 1 | 0 | 5 | 3 | 0 | 26 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Wyoming Basin | 12 | 0 | -2 | -2 | 3 | 1 | 12 | 0.01% | N/A | -0.19% | -0.01% | 0.00% | 0.12% | 0.00% |
| | Yellowstone Watershed | 0 | 0 | 0 | -4 | -13 | -2 | -20 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | -0.08% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada 2017 2018 | Black Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | N/A | 0.00% | 0.00% |
| | Butte/Buck/White Pine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Central Elko | 16 | 7 | 0 | 0 | 17 | 0 | 41 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Central Great Basin | 291 | 0 | 0 | 0 | 13 | 0 | 304 | 0.02% | 0.00% | N/A | N/A | 0.01% | N/A | 0.02% |
| | East High Desert | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Lassen/South Washoe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | 0.00% | 0.00% |
| | Monitor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Northeast Elko | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Northwest Great Basin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Northwest Interior | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Owyhee | 2 | 0 | 0 | 0 | 3 | 0 | 5 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Pueblo Range | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | N/A | 0.00% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 135 | 4 | 0 | 0 | 24 | 0 | 162 | 0.03% | 0.01% | 0.00% | N/A | 0.01% | 0.00% | 0.02% |
| | Smith/Reese | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Southeastern Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Beatys | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Brothers/N Wagontire | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Tucker Hill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | N/A | 0.00% | N/A | 0.00% |
| | Warners | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |

2017
2018

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Blacks Fork | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Buffalo | 0 | 0 | 0 | -10 | 2 | 0 | -8 | 0.00% | N/A | N/A | -0.04% | 0.00% | 0.00% | 0.00% |
| | Buffalo Connectivity | -50 | 0 | 0 | -5 | -64 | 0 | -118 | -0.25% | N/A | N/A | -0.04% | -0.03% | N/A | -0.05% |
| | Continental Divide | 0 | 0 | 0 | 0 | -10 | 0 | -10 | 0.00% | N/A | N/A | 0.00% | -0.01% | N/A | -0.01% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | -19 | 0 | 0 | 0 | -1 | 0 | -19 | -0.01% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Douglas | 0 | 0 | 0 | 0 | 24 | 0 | 24 | 0.00% | N/A | N/A | 0.00% | 0.04% | N/A | 0.04% |
| | Elk Basin East | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Elk Basin West | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0.00% | N/A | N/A | 0.00% | 0.16% | N/A | 0.13% |
| | Fontenelle | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.00% |
| | Grass Creek | 5 | 0 | 0 | 0 | 2 | 0 | 7 | 0.01% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Greater South Pass | 35 | 0 | 0 | 7 | -19 | -4 | 18 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | -0.05% | 0.00% |
| | Hanna | -3 | 0 | 0 | 0 | 3 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Heart Mountain | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Hyattville | -5 | 0 | 0 | 0 | 0 | 0 | -5 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Jackson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| 2017<br>2018 | Natrona | 7 | 0 | 0 | 1 | 0 | 0 | 9 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Newcastle | 0 | 0 | 0 | 0 | -5 | 0 | -5 | 0.00% | 0.00% | N/A | 0.00% | -0.01% | 0.00% | 0.00% |
| | North Gillete Connectivity | 6 | 0 | 0 | 0 | 23 | 0 | 30 | 0.02% | 0.00% | N/A | 0.00% | 0.03% | 0.00% | 0.02% |

| State | BSU ID | 1 year Change by SMA from 2017 to 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 0 | -4 | 0 | 0 | -3 | 0 | -7 | 0.00% | -0.01% | N/A | 0.00% | 0.00% | N/A | -0.01% |
| | North Glenrock | 2 | 0 | 0 | -2 | 38 | 0 | 37 | 0.00% | N/A | N/A | -0.02% | 0.05% | N/A | 0.03% |
| | North Laramie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | 368 | 0 | 0 | 9 | 56 | 0 | 433 | 0.09% | N/A | N/A | 0.02% | 0.04% | 0.00% | 0.07% |
| | Powder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Sage | 0 | 0 | 0 | 0 | -5 | 0 | -5 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Salt Wells | -3 | 0 | 0 | 0 | 0 | 0 | -3 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Seedskadee | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.02% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.01% |
| | Shell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | South Rawlins | -19 | 0 | 0 | 1 | -7 | 2 | -22 | -0.01% | 0.00% | 0.00% | 0.00% | 0.00% | 0.03% | 0.00% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2017 2018 | Thunder Basin | 5 | 0 | 0 | 12 | -9 | 0 | 8 | 0.01% | 0.00% | N/A | 0.02% | 0.00% | 0.00% | 0.00% |
| | Uinta | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Washakie | 1 | 0 | 0 | 0 | 5 | 0 | 6 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **700** | **40** | **-2** | **-35** | **167** | **-6** | **864** | **0.00%** | **0.00%** | **0.00%** | **0.00%** | **0.00%** | **0.00%** | **0.00%** |

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2018 2019 | Meeker/White River | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | N/A | N/A | N/A | 0.05% | 0.00% | 0.04% |
| | Middle Park | 2 | 0 | 0 | 31 | 25 | 0 | 58 | 0.00% | 0.00% | N/A | 0.20% | 0.02% | 0.00% | 0.03% |
| | North Eagle/South Routt | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.01% |
| | North Park | -10 | 0 | 0 | -4 | 20 | 0 | 6 | -0.01% | N/A | 0.00% | -0.02% | 0.02% | 0.00% | 0.00% |
| | Northwest Colorado | -3 | 0 | 0 | -1 | 35 | 0 | 31 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Parachute/Piceance/Roan | 13 | 0 | 0 | 0 | -3 | 10 | 20 | 0.03% | N/A | N/A | N/A | 0.00% | 0.68% | 0.01% |

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2018 2019 | Idaho Desert Conservation Area - IHMA | -18 | 0 | 0 | 0 | 1 | 0 | -17 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Idaho Desert Conservation Area - PHMA | -253 | 0 | 0 | -45 | -20 | 0 | -317 | -0.03% | N/A | 0.00% | -0.16% | -0.03% | N/A | -0.03% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 8 | 1 | 0 | 8 | 6 | 0 | 22 | 0.00% | 0.00% | 0.00% | 0.01% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - IHMA | 7 | 0 | 0 | 0 | 4 | 0 | 12 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - PHMA | -2 | 0 | 0 | 0 | -1 | 0 | -2 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - IHMA | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 0.00% | N/A | 0.00% | 0.01% | 0.00% | N/A | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | 7 | 0 | 0 | 0 | 0 | 0 | 7 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | 5 | 0 | 0 | 0 | 31 | -4 | 31 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | -0.07% | 0.00% |
| | Northern Montana | -11 | 0 | 1 | -10 | -186 | 0 | -206 | 0.00% | N/A | 0.01% | -0.01% | -0.03% | 0.00% | -0.01% |
| | Powder River Basin | 2 | 9 | 0 | 0 | -1 | 0 | 10 | 0.04% | 2.54% | 0.00% | -0.01% | 0.00% | N/A | 0.01% |
| | SW Montana Conservation Area | 0 | 10 | 0 | 0 | 0 | 0 | 10 | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2018 | Wyoming Basin | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2019 | Yellowstone Watershed | -82 | 0 | -7 | 0 | -284 | 0 | -373 | -0.01% | 0.06% | -0.01% | 0.00% | -0.01% | 0.00% | -0.01% |

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada | Black Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | N/A | 0.00% | 0.00% |
| | Butte/Buck/White Pine | 4 | 0 | 0 | 0 | 2 | 0 | 6 | 0.00% | 0.00% | 0.00% | N/A | 0.01% | N/A | 0.00% |
| | Central Elko | -1 | 10 | 0 | 0 | 5 | 0 | 14 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Central Great Basin | 138 | 0 | 0 | 0 | 42 | 0 | 180 | 0.01% | 0.00% | N/A | N/A | 0.03% | N/A | 0.01% |
| | East High Desert | -34 | 0 | 0 | 0 | -141 | 0 | -175 | -0.02% | 0.00% | 0.00% | 0.00% | -0.41% | N/A | -0.06% |
| | Lassen/South Washoe | 96 | 0 | 0 | 0 | 12 | 37 | 145 | 0.01% | N/A | 0.00% | 0.00% | 0.14% | 0.03% | 0.02% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | 0.00% | 0.00% |
| | Monitor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Northeast Elko | 1 | 0 | 0 | 0 | -3 | 0 | -1 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Northwest Great Basin | -1 | 0 | 0 | 0 | 0 | 0 | -1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Northwest Interior | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Owyhee | 9 | 13 | 0 | 0 | 165 | 0 | 188 | 0.00% | 0.01% | 0.00% | N/A | 0.05% | N/A | 0.01% |
| | Pueblo Range | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | N/A | 0.00% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 73 | 0 | 0 | 0 | 0 | 0 | 73 | 0.02% | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.01% |
| 2018 | Smith/Reese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Southeastern Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| 2019 | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Beatys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Brothers/N Wagontire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Tucker Hill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | N/A | 0.00% | N/A | 0.00% |
| | Warners | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |

2018
2019

| State | BSU ID | 1 year Change by SMA from 2018 to 2019 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 1 | 0 | 2 | -2 | 2 | 0 | 3 | 0.01% | N/A | 0.41% | -0.11% | 0.05% | N/A | 0.02% |
| | Blacks Fork | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Buffalo | 14 | 0 | 0 | 57 | 711 | 0 | 782 | 0.04% | N/A | N/A | 0.22% | 0.24% | 0.00% | 0.22% |
| | Buffalo Connectivity | 0 | 0 | 0 | 0 | -24 | 0 | -25 | 0.00% | N/A | N/A | 0.00% | -0.01% | N/A | -0.01% |
| | Continental Divide | 0 | 0 | 0 | 0 | -4 | 0 | -4 | 0.00% | N/A | N/A | 0.00% | -0.01% | N/A | 0.00% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | -2 | 0 | 0 | 0 | -1 | 0 | -2 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Douglas | 0 | 0 | 0 | 12 | 126 | 0 | 139 | 0.00% | N/A | N/A | 0.26% | 0.20% | N/A | 0.21% |
| | Elk Basin East | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Elk Basin West | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Fontenelle | -167 | -8 | 0 | -8 | -15 | 0 | -197 | -0.08% | -0.16% | N/A | -0.06% | -0.05% | N/A | -0.08% |
| | Grass Creek | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0.00% | N/A | 0.00% | 0.02% | 0.00% | 0.00% | 0.00% |
| | Greater South Pass | 447 | 0 | 0 | 33 | 110 | 0 | 590 | 0.01% | 0.00% | 0.00% | 0.01% | 0.02% | 0.00% | 0.01% |
| | Hanna | 5 | 0 | 0 | 0 | 29 | 0 | 34 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% |
| | Heart Mountain | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0.00% | N/A | 0.00% | 0.00% | 0.01% | 0.00% | 0.01% |
| | Hyattville | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Jackson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| 2018 | Natrona | 9 | 0 | 0 | 12 | 12 | 0 | 33 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Newcastle | 0 | -3 | 0 | -4 | -10 | 0 | -17 | 0.00% | -0.01% | N/A | -0.05% | -0.01% | 0.00% | -0.02% |
| 2019 | North Gillete Connectivity | 1 | 0 | 0 | 2 | -24 | 0 | -20 | 0.00% | 0.00% | N/A | 0.02% | -0.03% | 0.00% | -0.02% |

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| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| **Wyoming** *(continued)* | North Gillette | 0 | 1 | 0 | 0 | 4 | 0 | 5 | 0.00% | 0.00% | N/A | 0.00% | 0.01% | N/A | 0.00% |
| | North Glenrock | 5 | 0 | 0 | 2 | 18 | 0 | 25 | 0.01% | N/A | N/A | 0.02% | 0.02% | N/A | 0.02% |
| | North Laramie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | 761 | 0 | 0 | 9 | 55 | 0 | 826 | 0.19% | N/A | N/A | 0.02% | 0.04% | 0.00% | 0.14% |
| | Powder | -2 | 0 | 0 | 0 | 0 | 0 | -2 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Sage | -104 | 0 | -9 | -24 | -63 | -2 | -201 | -0.03% | 0.00% | -0.10% | -0.05% | -0.03% | -0.09% | -0.03% |
| | Salt Wells | -4 | 0 | 0 | 0 | 0 | 0 | -4 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Seedskadee | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0.00% | N/A | 0.00% | 0.00% | 0.02% | N/A | 0.01% |
| | Shell | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.02% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.01% |
| | South Rawlins | -10 | 0 | 0 | -5 | -4 | 0 | -19 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2018 | Thunder Basin | -5 | 39 | 0 | 40 | 657 | 0 | 731 | -0.01% | 0.02% | N/A | 0.07% | 0.12% | 0.00% | 0.09% |
| | Uinta | -3 | 0 | 0 | -1 | -7 | 0 | -11 | 0.00% | 0.02% | N/A | -0.02% | -0.01% | 0.59% | 0.00% |
| 2019 | Washakie | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **1,597** | **278** | **-14** | **234** | **1,520** | **31** | **3,646** | **0.00%** | **0.01%** | **0.00%** | **0.01%** | **0.01%** | **0.01%** | **0.01%** |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
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| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2019 2020 | Meeker/White River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | 0.00% | 0.00% |
| | Middle Park | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | North Eagle/South Routt | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.00% | 0.08% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | North Park | -5 | 0 | 0 | 0 | -1 | 0 | -6 | -0.01% | N/A | 0.00% | 0.00% | 0.00% | 0.01% | 0.00% |
| | Northwest Colorado | -6 | 0 | 0 | -6 | 20 | 0 | 9 | 0.00% | N/A | 0.00% | -0.01% | 0.00% | 0.00% | 0.00% |
| | Parachute/Piceance/Roan | 5 | 0 | 0 | 0 | 48 | 0 | 53 | 0.01% | N/A | N/A | N/A | 0.04% | 0.00% | 0.04% |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2019 2020 | Idaho Desert Conservation Area - IHMA | -2 | 0 | 6 | 1 | 2 | 0 | 6 | 0.00% | -0.01% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Idaho Desert Conservation Area - PHMA | 2 | 0 | 0 | 0 | -2 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 5 | 2 | 0 | -2 | -2 | -2 | 0 | 0.00% | 0.00% | 0.00% | -0.01% | 0.00% | -1.04% | 0.00% |
| | Idaho Mountain Valleys Conservation Area - PHMA | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Idaho Southern Conservation Area - IHMA | -1 | 0 | 0 | 0 | 1 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 2.28% | 0.00% |
| | Idaho Southern Conservation Area - PHMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.20% | 0.00% | 0.00% | 0.43% | 0.00% |
| | Idaho West Owyhee Conservation Area - IHMA | 1 | 0 | 0 | 0 | -1 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana | Dakotas | -10 | 0 | 0 | 0 | -37 | 0 | -47 | 0.00% | 0.00% | -0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Northern Montana | 0 | 0 | 0 | 0 | -10 | 0 | -10 | 0.00% | N/A | -0.01% | 0.01% | 0.00% | 0.00% | 0.00% |
| | Powder River Basin | 0 | 0 | 5 | 0 | -8 | 0 | -3 | 0.00% | 0.00% | 0.06% | 0.00% | 0.00% | 0.00% | 0.00% |
| | SW Montana Conservation Area | 0 | 0 | 0 | 0 | 3 | -3 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | -0.01% | 0.00% |
| 2019 | Wyoming Basin | -9 | 0 | 9 | 0 | 11 | 0 | 10 | -0.01% | N/A | -0.02% | 0.00% | 0.01% | 0.00% | 0.01% |
| 2020 | Yellowstone Watershed | -5 | 0 | 0 | 0 | -49 | 0 | -54 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada | Black Rock | 13 | 0 | 66 | 0 | 73 | -152 | 0 | 0.00% | N/A | 0.44% | N/A | 0.54% | -0.59% | 0.00% |
| | Butte/Buck/White Pine | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Central Elko | -2 | 0 | 0 | 0 | 3 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.01% | 0.12% | 0.00% |
| | Central Great Basin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | N/A | 0.00% | N/A | 0.00% |
| | East High Desert | 3 | 0 | 0 | 0 | 2 | 0 | 5 | 0.00% | 0.00% | 0.00% | 0.02% | 0.00% | 4.29% | 0.00% |
| | Lassen/South Washoe | -1 | 0 | 0 | 0 | 157 | -157 | -1 | 0.00% | N/A | 0.00% | 0.00% | 0.14% | -0.03% | 0.00% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 3 | 0 | 0 | 0 | 105 | -108 | 0 | 0.00% | N/A | N/A | N/A | 0.07% | -0.48% | 0.00% |
| | Monitor | 0 | 11 | 0 | 0 | 0 | 0 | 11 | 0.00% | 0.01% | 0.00% | N/A | 0.00% | N/A | 0.01% |
| | Northeast Elko | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.47% | 0.00% |
| | Northwest Great Basin | -292 | 0 | 5 | 0 | 23 | -53 | -317 | -0.03% | 0.00% | 0.00% | 0.00% | 0.55% | -0.01% | -0.02% |
| | Northwest Interior | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Owyhee | -5 | -3 | 0 | 0 | 0 | 0 | -9 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | 0.03% | 0.01% |
| | Pueblo Range | 3 | 0 | 0 | 0 | 14 | -17 | 0 | 0.04% | N/A | N/A | N/A | 3.24% | -3.66% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% |
| 2019 | Smith/Reese | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% |
| | Southeastern Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | -0.04% | 0.00% | 0.00% | 0.00% |
| 2020 | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 3.07% | 0.00% | N/A | 0.00% |
| | Beatys | -26 | 0 | -61 | -19 | -16 | 0 | -122 | -0.01% | N/A | -0.03% | -0.12% | -0.03% | 0.03% | -0.02% |
| | Brothers/N Wagontire | -83 | 0 | 0 | 0 | -11 | 0 | -94 | -0.05% | 0.00% | N/A | 0.00% | -0.01% | N/A | -0.03% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | -1.67% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | -9 | 0 | 9 | 0 | 0 | 0.00% | N/A | -0.03% | 0.00% | -0.03% | 4.17% | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | -18 | -7 | 0 | 0 | -4 | 0 | -29 | -0.05% | -0.53% | N/A | -0.10% | -0.10% | 0.03% | -0.06% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | -0.05% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | -0.25% | 0.00% |
| 2019 | Tucker Hill | 3 | 0 | 0 | 0 | -3 | 0 | 0 | 0.01% | 0.11% | N/A | N/A | -0.02% | N/A | 0.00% |
| 2020 | Warners | -280 | 8 | 0 | -10 | -72 | 0 | -354 | -0.12% | 0.81% | N/A | -0.14% | -0.10% | N/A | -0.11% |

| State | BSU ID | 1 year Change by SMA from 2019 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Blacks Fork | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Buffalo | -19 | 0 | 0 | -12 | 37 | 0 | 6 | -0.06% | N/A | N/A | -0.05% | 0.01% | 0.00% | 0.00% |
| | Buffalo Connectivity | -10 | 0 | 0 | -1 | 11 | 0 | 1 | -0.05% | N/A | N/A | -0.01% | 0.00% | N/A | 0.00% |
| | Continental Divide | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | -5 | 0 | 0 | 0 | -5 | 0 | -10 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Douglas | 0 | 0 | 0 | 2 | -6 | 0 | -4 | 0.00% | N/A | N/A | 0.04% | -0.01% | 21.26% | -0.01% |
| | Elk Basin East | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Elk Basin West | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Fontenelle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Grass Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.01% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Greater South Pass | -171 | 0 | 0 | -17 | -105 | 0 | -293 | 0.00% | 0.00% | 0.00% | 0.00% | -0.01% | 0.00% | 0.00% |
| | Hanna | -29 | 0 | 0 | 0 | -38 | -1 | -68 | -0.01% | N/A | 0.00% | 0.00% | -0.02% | 0.00% | -0.01% |
| | Heart Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Hyattville | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Jackson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | 0.00% | 0.00% | 0.04% | 0.00% | 0.00% | 0.00% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% | N/A | 0.00% |
| 2019 | Natrona | 36 | 0 | 0 | 0 | -5 | 0 | 30 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 2020 | Newcastle | 577 | -577 | 0 | -8 | -9 | 0 | -18 | 1.83% | 0.82% | N/A | -0.12% | -0.01% | 0.01% | -0.01% |
| | North Gillete Connectivity | 68 | -68 | 0 | 0 | -1 | 0 | -1 | 0.08% | -0.54% | N/A | 0.00% | 0.00% | 0.00% | 0.00% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming *(continued)* | North Gillette | 422 | -422 | 0 | 0 | -10 | 0 | -10 | 1.12% | -0.13% | N/A | 0.00% | -0.02% | N/A | 0.00% |
| | North Glenrock | -1 | 0 | 0 | 0 | 8 | 0 | 6 | 0.00% | N/A | N/A | 0.00% | 0.01% | N/A | 0.01% |
| | North Laramie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | -10 | 0 | 0 | 0 | -3 | 0 | -13 | 0.00% | N/A | N/A | 0.00% | -0.01% | 0.00% | -0.01% |
| | Powder | -10 | 0 | 0 | 0 | 0 | 0 | -10 | -0.02% | N/A | N/A | 0.00% | 0.00% | N/A | -0.02% |
| | Sage | -5 | 0 | 0 | 0 | 0 | 0 | -5 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Salt Wells | -5 | 0 | 0 | 0 | -9 | 0 | -14 | 0.00% | N/A | N/A | 0.00% | -0.01% | N/A | 0.00% |
| | Seedskadee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Shell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | South Rawlins | -8 | 0 | -1 | -12 | -32 | 0 | -52 | 0.00% | 0.00% | -0.14% | -0.01% | -0.01% | 0.00% | 0.00% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| 2019 2020 | Thunder Basin | 1,603 | -1,611 | 0 | 0 | 83 | 0 | 74 | 0.83% | -0.12% | N/A | 0.00% | 0.02% | 0.00% | 0.01% |
| | Uinta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.01% | N/A | 0.00% | 0.00% | 0.29% | 0.00% |
| | Washakie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **1,729** | **-2,652** | **21** | **-79** | **175** | **-493** | **-1,300** | **0.00%** | **-0.06%** | **0.00%** | **-0.02%** | **-0.01%** | **0.00%** | **-0.01%** |

| State | BSU ID | Overall Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Colorado 2015 2020 | Meeker/White River | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0.00% | N/A | N/A | N/A | 0.08% | 0.00% | 0.07% |
| | Middle Park | 2 | 0 | 0 | 31 | 17 | 0 | 50 | 0.00% | 0.00% | N/A | 0.20% | 0.02% | 0.00% | 0.03% |
| | North Eagle/South Routt | -4 | 1 | 0 | -5 | -11 | 0 | -18 | -0.01% | 0.10% | N/A | -0.18% | -0.01% | N/A | -0.02% |
| | North Park | -27 | 0 | 0 | 2 | 48 | 0 | 24 | -0.03% | N/A | 0.00% | 0.01% | 0.04% | 0.01% | 0.01% |
| | Northwest Colorado | -65 | 0 | 0 | -52 | -189 | -1 | -308 | -0.01% | N/A | 0.00% | -0.05% | -0.04% | -0.01% | -0.03% |
| | Parachute/Piceance/Roan | 56 | 0 | 0 | 0 | 430 | 10 | 497 | 0.15% | N/A | N/A | N/A | 0.39% | 0.68% | 0.33% |

| State | BSU ID | Overall Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Idaho 2015 2020 | Idaho Desert Conservation Area - IHMA | 7 | 2 | 33 | 14 | 46 | 0 | 101 | 0.00% | 0.29% | 0.02% | 0.05% | 0.06% | 0.00% | 0.02% |
| | Idaho Desert Conservation Area - PHMA | -330 | 0 | -4 | -61 | 35 | 0 | -358 | -0.04% | N/A | -0.01% | -0.22% | 0.04% | N/A | -0.03% |
| | Idaho Mountain Valleys Conservation Area - IHMA | 158 | 36 | 2 | 5 | 150 | -2 | 349 | 0.02% | 0.03% | 0.04% | 0.01% | 0.07% | -1.10% | 0.03% |
| | Idaho Mountain Valleys Conservation Area - PHMA | 103 | 24 | -6 | 6 | 66 | 0 | 192 | 0.01% | 0.02% | -0.01% | 0.01% | 0.02% | N/A | 0.01% |
| | Idaho Southern Conservation Area - IHMA | 8 | 29 | 0 | 3 | 17 | 0 | 58 | 0.00% | 0.02% | 0.00% | 0.00% | 0.01% | 2.28% | 0.01% |
| | Idaho Southern Conservation Area - PHMA | 71 | -38 | 0 | 5 | 18 | 0 | 56 | 0.02% | -0.07% | 0.27% | 0.02% | 0.01% | 0.43% | 0.00% |
| | Idaho West Owyhee Conservation Area - IHMA | 7 | 0 | 0 | 2 | 3 | 0 | 12 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Idaho West Owyhee Conservation Area - PHMA | 13 | 0 | 0 | 0 | 5 | 0 | 18 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

| State | BSU ID | Overall Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Montana 2015 2020 | Dakotas | 32 | 9 | 0 | -21 | 190 | -5 | 204 | 0.02% | 0.02% | 0.00% | -0.01% | 0.02% | -0.08% | 0.02% |
| | Northern Montana | -404 | 0 | 0 | -27 | -416 | 0 | -847 | -0.03% | N/A | -0.01% | -0.01% | -0.05% | 0.00% | -0.03% |
| | Powder River Basin | 2 | 9 | 5 | -1 | -4 | 0 | 11 | 0.05% | 2.54% | 0.06% | -0.03% | 0.01% | 0.00% | 0.01% |
| | SW Montana Conservation Area | 49 | 101 | 0 | 25 | 69 | -2 | 244 | 0.01% | 0.06% | 0.00% | 0.01% | 0.01% | 0.00% | 0.02% |
| | Wyoming Basin | 5 | 0 | 7 | -1 | 70 | 1 | 82 | 0.01% | N/A | -0.21% | -0.01% | 0.04% | 0.07% | 0.03% |
| | Yellowstone Watershed | -66 | 1 | 43 | -29 | -131 | -2 | -185 | -0.01% | 0.38% | 0.05% | 0.00% | -0.01% | -0.08% | 0.00% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Nevada 2015 2020 | Black Rock | 13 | 0 | 66 | 0 | 73 | -152 | 0 | 0.00% | N/A | 0.44% | N/A | 0.54% | -0.59% | 0.00% |
| | Butte/Buck/White Pine | -34 | 0 | 0 | 0 | -20 | 0 | -54 | 0.00% | 0.00% | 0.00% | N/A | -0.08% | N/A | -0.01% |
| | Central Elko | -28 | 20 | 0 | 0 | 613 | 0 | 605 | -0.01% | 0.00% | 0.00% | -0.01% | 0.10% | 0.12% | 0.03% |
| | Central Great Basin | 806 | 38 | 0 | 0 | 758 | 0 | 1,601 | 0.07% | 0.15% | N/A | N/A | 0.59% | N/A | 0.12% |
| | East High Desert | -32 | 0 | 0 | 0 | -140 | 0 | -172 | -0.02% | 0.00% | 0.00% | 0.02% | -0.41% | 4.29% | -0.06% |
| | Lassen/South Washoe | 96 | 0 | 0 | 0 | 169 | -113 | 152 | 0.01% | N/A | 0.00% | 0.00% | 0.29% | 0.01% | 0.02% |
| | Likely Tables PMU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | N/A | 0.00% | 0.00% |
| | Lone Willow | 9 | 0 | 0 | 0 | 105 | -102 | 11 | 0.00% | N/A | N/A | N/A | 0.07% | -0.45% | 0.00% |
| | Monitor | 0 | 11 | 0 | 0 | 0 | 0 | 11 | 0.00% | 0.01% | 0.00% | N/A | 0.00% | N/A | 0.01% |
| | Northeast Elko | 2 | -1 | 0 | 0 | 6 | 0 | 7 | 0.00% | -0.10% | N/A | 0.00% | 0.01% | 0.47% | 0.01% |
| | Northwest Great Basin | -279 | 0 | 5 | 0 | 23 | -29 | -281 | -0.02% | 0.00% | 0.00% | 0.00% | 0.55% | 0.01% | -0.02% |
| | Northwest Interior | 1 | 0 | 0 | 0 | 16 | 0 | 17 | 0.00% | N/A | N/A | N/A | 0.03% | N/A | 0.01% |
| | Owyhee | 123 | 51 | 1 | 0 | 367 | 0 | 543 | 0.01% | 0.03% | 0.07% | N/A | 0.10% | 0.03% | 0.03% |
| | Pueblo Range | 3 | 0 | 0 | 0 | 14 | -17 | 0 | 0.04% | N/A | N/A | N/A | 3.24% | -3.66% | 0.00% |
| | Quinn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Ruby | 976 | 22 | 1 | 0 | 186 | 0 | 1,184 | 0.23% | 0.03% | 0.00% | N/A | 0.07% | 0.00% | 0.15% |
| | Smith/Reese | 6 | 0 | 0 | 0 | 3 | 0 | 8 | 0.00% | 0.00% | 0.00% | N/A | 0.02% | N/A | 0.00% |
| | Southeastern Nevada | -2 | 0 | 0 | 0 | 6 | 0 | 3 | 0.00% | 0.00% | 0.00% | -0.04% | 0.03% | 0.00% | 0.00% |
| | Western Pershing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Oregon | Baker | 6 | 0 | 0 | 0 | 14 | 0 | 21 | 0.00% | 0.00% | 0.00% | 10.43% | 0.01% | N/A | 0.00% |
| | Beatys | -22 | 0 | -61 | -19 | -16 | 0 | -118 | -0.01% | N/A | -0.03% | -0.12% | -0.03% | 0.03% | -0.02% |
| | Brothers/N Wagontire | -83 | 0 | 0 | 0 | 0 | 0 | -83 | -0.05% | 0.00% | N/A | 0.00% | 0.00% | N/A | -0.02% |
| | Bully Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | -1.67% | 0.00% | 0.00% | N/A | 0.00% |
| | Burns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Cow Lakes | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Cow Valley | 0 | 0 | 0 | 0 | 25 | 0 | 25 | 0.00% | N/A | N/A | 0.00% | 0.01% | N/A | 0.01% |
| | Crowley | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Drewsey | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Dry Valley/Jack Mountain | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Folly Farm/Saddle Butte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Louse Canyon | 0 | 0 | -9 | 0 | 9 | 0 | 0 | 0.00% | N/A | -0.03% | 0.00% | -0.03% | 4.17% | 0.00% |
| | Paulina/12 Mile/Misery Flat | 0 | 2 | 0 | 0 | 1 | 0 | 2 | 0.00% | 0.01% | N/A | 0.00% | 0.00% | N/A | 0.00% |
| | Picture Rock | -18 | -7 | 0 | 0 | -3 | 0 | -28 | -0.05% | -0.53% | N/A | -0.10% | -0.08% | 0.03% | -0.06% |
| | Pueblos/S Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | N/A | 0.00% | N/A | 0.00% |
| | Soldier Creek | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | -0.05% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Steens | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | 0.00% | 0.00% | N/A | 0.00% |
| | Trout Creeks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | N/A | 0.00% | 0.00% | -0.25% | 0.00% |
| 2015 2020 | Tucker Hill | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0.01% | 0.11% | N/A | N/A | 0.00% | N/A | 0.01% |
| | Warners | -279 | 8 | 0 | -10 | -68 | 0 | -349 | -0.12% | 0.81% | N/A | -0.14% | -0.09% | N/A | -0.11% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| Wyoming | Bear River | 1 | 0 | 2 | -2 | 2 | 0 | 3 | 0.01% | N/A | 0.41% | -0.11% | 0.05% | 0.00% | 0.01% |
| | Blacks Fork | 4 | 1 | 0 | 0 | 11 | 0 | 16 | 0.00% | 0.01% | N/A | 0.00% | 0.01% | 0.00% | 0.01% |
| | Buffalo | 15 | 0 | 0 | 50 | 696 | 0 | 761 | 0.05% | N/A | N/A | 0.19% | 0.23% | 0.00% | 0.21% |
| | Buffalo Connectivity | -49 | 0 | 0 | -65 | 284 | 0 | 170 | -0.24% | N/A | N/A | -0.52% | 0.13% | N/A | 0.07% |
| | Continental Divide | 5 | 0 | 0 | 0 | -54 | 0 | -49 | 0.00% | N/A | N/A | 0.00% | -0.06% | N/A | -0.03% |
| | Crowheart | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | Daniel | 763 | 0 | 0 | 42 | 268 | 2 | 1,075 | 0.33% | 0.00% | N/A | 0.16% | 0.11% | 0.09% | 0.21% |
| | Douglas | 0 | 0 | 0 | 16 | 157 | 0 | 173 | 0.08% | N/A | N/A | 0.34% | 0.25% | 21.26% | 0.26% |
| | Elk Basin East | 3 | 0 | 12 | 0 | 2 | 3 | 21 | 0.06% | N/A | 0.24% | 0.00% | 0.01% | 0.42% | 0.06% |
| | Elk Basin West | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0.00% | N/A | N/A | 0.00% | 0.12% | 0.00% | 0.11% |
| | Fontenelle | -154 | -8 | 0 | -8 | 0 | 0 | -169 | -0.07% | -0.16% | N/A | -0.06% | 0.00% | N/A | -0.07% |
| | Grass Creek | 7 | 0 | 0 | 3 | 22 | 0 | 31 | 0.01% | N/A | 0.01% | 0.03% | 0.03% | 0.00% | 0.02% |
| | Greater South Pass | 3,351 | 4 | -2 | 197 | 485 | -3 | 4,032 | 0.10% | 0.18% | 0.00% | 0.07% | 0.07% | -0.02% | 0.09% |
| | Hanna | -25 | 0 | -4 | -14 | -41 | -2 | -87 | -0.01% | N/A | -0.03% | -0.04% | -0.02% | -0.01% | -0.01% |
| | Heart Mountain | 6 | 0 | 3 | 3 | 58 | 0 | 70 | 0.01% | N/A | 0.04% | 0.01% | 0.10% | 0.00% | 0.06% |
| | Hyattville | 2 | 0 | 0 | 26 | -13 | 0 | 15 | 0.00% | N/A | N/A | 0.21% | -0.06% | 0.00% | 0.01% |
| | Jackson | 0 | 1 | 0 | 0 | 2 | 0 | 3 | N/A | 0.00% | 0.00% | 0.04% | 0.09% | 0.00% | 0.01% |
| | Little Mountain | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0.00% | 0.01% | 0.00% | 0.00% | N/A | 0.00% |
| 2015 | Natrona | 0 | 0 | 0 | 27 | 68 | 1 | 96 | 0.00% | 0.00% | 0.00% | 0.01% | 0.01% | 0.01% | 0.00% |
| | Newcastle | 579 | -583 | 0 | -4 | 266 | 0 | 258 | 1.89% | 0.80% | N/A | -0.06% | 0.37% | 0.01% | 0.24% |
| 2020 | North Gillete Connectivity | 69 | -68 | 0 | 2 | -33 | 0 | -30 | 0.08% | -0.55% | N/A | 0.02% | -0.04% | 0.00% | -0.02% |

| State | BSU ID | 1 year Change by SMA from 2015 to 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acres | | | | | | | Percent | | | | | | |
| | | BLM | USFS | Other Federal | State | Private | Other | Total | BLM | USFS | Other Federal | State | Private | Other | Total |
| **Wyoming** *(continued)* | North Gillette | 424 | -418 | 0 | 0 | 8 | 0 | 14 | 1.16% | -0.12% | N/A | 0.00% | 0.01% | N/A | 0.02% |
| | North Glenrock | 12 | 0 | 0 | 12 | 101 | 0 | 126 | 0.04% | N/A | N/A | 0.10% | 0.13% | N/A | 0.10% |
| | North Laramie | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.00% | N/A | N/A | 0.00% | 0.00% | 0.00% | 0.00% |
| | Oregon Basin | 1,574 | 0 | 0 | 44 | 241 | 0 | 1,859 | 0.38% | N/A | N/A | 0.09% | 0.15% | 0.00% | 0.30% |
| | Powder | -19 | 0 | 0 | 0 | 0 | 0 | -19 | -0.04% | N/A | N/A | 0.00% | 0.00% | N/A | -0.03% |
| | Sage | -110 | 0 | -8 | -26 | -102 | -2 | -247 | -0.03% | 0.00% | -0.10% | -0.05% | -0.05% | -0.08% | -0.04% |
| | Salt Wells | 54 | 0 | 0 | 20 | 102 | 0 | 176 | 0.02% | N/A | N/A | 0.09% | 0.13% | N/A | 0.04% |
| | Seedskadee | 26 | 0 | 0 | 0 | 20 | 0 | 46 | 0.12% | N/A | 0.00% | 0.00% | 0.07% | N/A | 0.09% |
| | Shell | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0.02% | 0.00% | N/A | 0.00% | 0.00% | N/A | 0.01% |
| | South Rawlins | 5 | 0 | 0 | 7 | 115 | 1 | 128 | 0.00% | 0.00% | 0.00% | 0.01% | 0.03% | 0.01% | 0.02% |
| | Thermopolis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | N/A | 0.00% | N/A | 0.00% | N/A | 0.00% |
| **2015 2020** | Thunder Basin | 1,593 | -1,517 | 0 | 34 | 663 | 0 | 773 | 0.82% | -0.07% | N/A | 0.06% | 0.12% | -0.05% | 0.09% |
| | Uinta | 6 | 0 | 0 | -1 | 4 | 0 | 9 | 0.00% | 0.02% | N/A | -0.02% | 0.00% | 0.88% | 0.00% |
| | Washakie | 2 | 0 | 0 | 6 | 21 | 0 | 28 | 0.00% | N/A | N/A | 0.01% | 0.01% | N/A | 0.00% |
| **GRAND TOTAL ALL STATES** | | **9,938** | **-1,985** | **103** | **445** | **9,177** | **-414** | **17,263** | **0.02%** | **-0.03%** | **0.00%** | **0.00%** | **0.04%** | **0.02%** | **0.02%** |

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# Appendix 5: Density of Energy Mining Facility Counts, Estimates, and Change by BSU

| Colorado | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Meeker/ White River | Middle Park | North Eagle/ South Routt | North Park | Northwest Colorado | Parachute/ Piceance/ Roan |
| **Acres of PHMA & IHMA in BSU** | 8,695 | 177,820 | 105,462 | 260,267 | 1,161,874 | 148,401 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 2 | 1 | 207 | 548 | 1,151 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.01 | 0.01 | 0.51 | 0.30 | 4.96 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 1 | 1 | 227 | 525 | 964 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.01 | 0.56 | 0.29 | 4.16 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 1 | 1 | 227 | 510 | 1,041 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.01 | 0.56 | 0.28 | 4.49 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 220 | 483 | 992 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.54 | 0.27 | 4.28 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 233 | 480 | 1,022 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.57 | 0.26 | 4.41 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 237 | 476 | 1,070 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.58 | 0.26 | 4.61 |
| **1 year Change - 2015 to 2016** | 0 | -1 | 0 | 20 | -23 | -187 |
| | 0.00 | 0.00 | 0.00 | 0.05 | -0.01 | -0.81 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 | -15 | 77 |
| | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | 0.33 |
| **1 year Change - 2017 to 2018** | 0 | -1 | -1 | -7 | -27 | -49 |
| | 0.00 | 0.00 | -0.01 | -0.02 | -0.01 | -0.21 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 13 | -3 | 30 |
| | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.13 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 4 | -4 | 48 |
| | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.21 |
| **Overall Change - 2015 to 2020** | 0 | -2 | -1 | 30 | -72 | -81 |
| | 0.00 | -0.01 | -0.01 | 0.07 | -0.04 | -0.35 |

| Idaho | | | | |
|---|---|---|---|---|
| **BSU ID** | Idaho Desert Conservation Area - IHMA | Idaho Desert Conservation Area - PHMA | Idaho Mountain Valleys Conservation Area - IHMA | Idaho Mountain Valleys Conservation Area - PHMA |
| **Acres of PHMA & IHMA in BSU** | 726,862 | 963,230 | 1,016,488 | 1,733,249 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |

| Idaho *(continued)* | | | | |
|---|---|---|---|---|
| **BSU ID** | Idaho Southern Conservation Area - IHMA | Idaho Southern Conservation Area - PHMA | Idaho West Owyhee Conservation Area - IHMA | Idaho West Owyhee Conservation Area - PHMA |
| **Acres of PHMA & IHMA in BSU** | 1,053,563 | 784,958 | 499,262 | 1,727,145 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 |

| Montana | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Dakotas | Northern Montana | Powder River Basin | SW Montana Conservation Area | Wyoming Basin | Yellowstone Watershed |
| **Acres of PHMA & IHMA in BSU** | 1,444,236 | 2,369,723 | 78,971 | 1,356,953 | 310,640 | 5,224,902 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 1,081 | 18 | 73 | 0 | 89 | 731 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.48 | 0.00 | 0.59 | 0.00 | 0.18 | 0.09 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 1,073 | 17 | 73 | 0 | 73 | 704 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.48 | 0.00 | 0.59 | 0.00 | 0.15 | 0.09 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 1,075 | 17 | 73 | 0 | 77 | 714 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.48 | 0.00 | 0.59 | 0.00 | 0.16 | 0.09 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 1,069 | 17 | 73 | 0 | 73 | 701 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.47 | 0.00 | 0.59 | 0.00 | 0.15 | 0.09 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 1,075 | 17 | 70 | 0 | 74 | 706 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.48 | 0.00 | 0.57 | 0.00 | 0.15 | 0.09 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 1,064 | 15 | 64 | 0 | 76 | 703 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.47 | 0.00 | 0.52 | 0.00 | 0.16 | 0.09 |
| **1 year Change - 2015 to 2016** | -8 | -1 | 0 | 0 | -16 | -27 |
| | 0.00 | 0.00 | 0.00 | 0.00 | -0.03 | 0.00 |
| **1 year Change - 2016 to 2017** | 2 | 0 | 0 | 0 | 4 | 10 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| **1 year Change - 2017 to 2018** | -6 | 0 | 0 | 0 | -4 | -13 |
| | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 |
| **1 year Change - 2018 to 2019** | 6 | 0 | -3 | 0 | 1 | 5 |
| | 0.00 | 0.00 | -0.02 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | -11 | -2 | -6 | 0 | 2 | -3 |
| | 0.00 | 0.00 | -0.05 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | -17 | -3 | -9 | 0 | -13 | -28 |
| | -0.01 | 0.00 | -0.07 | 0.00 | -0.03 | 0.00 |

| Nevada/California | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Black Rock | Butte/ Buck/White Pine | Central Elko | Central Great Basin | East High Desert | Lassen/ South Washoe |
| **Acres of PHMA & IHMA in BSU** | 262,187 | 696,004 | 2,568,269 | 1,344,542 | 278,770 | 824,862 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 6 | 21 | 41 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 4 | 9 | 12 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 4 | 9 | 27 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 4 | 9 | 29 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 5 | 9 | 27 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 5 | 9 | 35 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | -2 | -12 | -29 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 15 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 2 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 1 | 0 | -2 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 8 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | -1 | -12 | -6 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Nevada/California *(continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Likely Tables PMU | Lone Willow | Monitor | Northeast Elko | Northwest Great Basin (NV) | Northwest Interior |
| **Acres of PHMA & IHMA in BSU** | 13,888 | 371,322 | 459,147 | 674,316 | 1,679,636 | 231,323 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Nevada/California *(continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Owyhee | Pueblo Range | Ruby | Smith/Reese | Southeastern Nevada | Western Pershing |
| **Acres of PHMA & IHMA in BSU** | 1,931,954 | 7,622 | 802,253 | 301,418 | 339,957 | 9,451 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 25 | 0 | 20 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 16 | 0 | 14 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 26 | 0 | 16 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 26 | 0 | 16 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 26 | 0 | 16 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 26 | 0 | 16 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | -9 | 0 | -6 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 10 | 0 | 2 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 1 | 0 | -4 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Oregon | | | | | | | |
|---|---|---|---|---|---|---|---|
| **BSU ID** | Baker BS4:CL29 | Beatys | Brothers/ N Wagontire | Bully Creek | Burns | Cow Lakes | Cow Valley |
| **Acres of PHMA & IHMA in BSU** | 336,540 | 840,842 | 293,399 | 279,850 | 35,771 | 249,730 | 368,614 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 2 | 2 | 0 | 0 | 0 | 5 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 2 | 2 | 0 | 0 | 0 | 6 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 2 | 2 | 0 | 0 | 0 | 6 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 2 | 2 | 0 | 0 | 0 | 6 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 2 | 2 | 0 | 0 | 0 | 6 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |

| Oregon *(continued)* | | | | | | | |
|---|---|---|---|---|---|---|---|
| **BSU ID** | Crowley | Drewsey | Dry Valley/ Jack Mountain | Folly Farm/ Saddle Butte | Louse Canyon | Paulina/12 Mile/Misery Flat | Picture Rock |
| **Acres of PHMA & IHMA in BSU** | 491,043 | 368,713 | 449,398 | 251,568 | 671,920 | 430,983 | 42,590 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Oregon *(continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Pueblos/ S Steens | Soldier Creek | Steens | Trout Creeks | Tucker Hill | Warners |
| **Acres of PHMA & IHMA in BSU** | 208,799 | 295,416 | 185,731 | 393,476 | 31,531 | 330,085 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Utah | | | | | | | |
|---|---|---|---|---|---|---|---|
| **BSU ID** | Bald Hills | Box Elder | Carbon | Emery | Hamlin Valley | Ibapah | Panguitch |
| **Acres of PHMA & IHMA in BSU** | 326,404 | 1,135,344 | 259,575 | 85,568 | 143,612 | 88,756 | 344,074 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 0 | 0 | 161 | 0 | 0 | 0 | 1 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 0 | 0 | 163 | 0 | 0 | 0 | 1 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 0 | 0 | 160 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 0 | 0 | 159 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 0 | 0 | 160 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 0 | 0 | 160 | 0 | 0 | 0 | 2 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2015 to 2016** | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | -3 | 0 | 0 | 0 | 1 |
| | 0.00 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | -1 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | -1 | 0 | 0 | 0 | 1 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Utah *(continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **BSU ID** | Parker Mtn | Raft River | Rich County | Sheeprocks | Strawberry | Uintah-Diamond Mtn |
| **Acres of PHMA & IHMA in BSU** | 741,757 | 66,904 | 1,016,173 | 646,837 | 161,593 | 565,734 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2015** | 2 | 0 | 97 | 0 | 2 | 75 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.00 | 0.00 | 0.06 | 0.00 | 0.01 | 0.08 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2016** | 2 | 0 | 86 | 0 | 1 | 73 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.08 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2017** | 2 | 0 | 84 | 0 | 2 | 73 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.00 | 0.00 | 0.05 | 0.00 | 0.01 | 0.08 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2018** | 3 | 0 | 82 | 0 | 1 | 74 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.08 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2019** | 3 | 0 | 84 | 0 | 1 | 69 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.08 |
| **Energy and Mining Feature Count in PHMAs/IHMAs within BSUs 2020** | 2 | 0 | 80 | 0 | 0 | 69 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.08 |
| **1 year Change - 2015 to 2016** | 0 | 0 | -11 | 0 | -1 | -2 |
| | 0.00 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 0 | -2 | 0 | 1 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 1 | 0 | -2 | 0 | -1 | 1 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 0 | 0 | 2 | 0 | 0 | -5 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 |
| **1 year Change - 2019 to 2020** | -1 | 0 | -4 | 0 | -1 | 0 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | 0 | 0 | -17 | 0 | -2 | -6 |
| | 0.00 | 0.00 | -0.01 | 0.00 | -0.01 | -0.01 |

| Wyoming | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **BSU ID** | Bear River | Blacks Fork | Buffalo | Buffalo Connectivity | Continental Divide | Daniel | Douglas | Elk Basin East | Elk Basin West | Fontenelle |
| **Acres of PHMA & IHMA in BSU** | 18,665 | 167,486 | 357,148 | 243,709 | 172,263 | 515,661 | 66,894 | 35,689 | 10,409 | 254,859 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 4 | 5 | 75 | 432 | 21 | 68 | 145 | 3 | 1 | 20 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.14 | 0.02 | 0.13 | 1.13 | 0.08 | 0.08 | 1.39 | 0.05 | 0.06 | 0.05 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 3 | 5 | 84 | 405 | 18 | 65 | 130 | 2 | 0 | 20 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.10 | 0.02 | 0.15 | 1.06 | 0.07 | 0.08 | 1.24 | 0.04 | 0.00 | 0.05 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 3 | 6 | 68 | 346 | 12 | 59 | 147 | 2 | 0 | 20 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.10 | 0.02 | 0.12 | 0.91 | 0.04 | 0.07 | 1.41 | 0.04 | 0.00 | 0.05 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 3 | 6 | 80 | 309 | 10 | 55 | 170 | 2 | 0 | 21 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.10 | 0.02 | 0.14 | 0.81 | 0.04 | 0.07 | 1.63 | 0.04 | 0.00 | 0.05 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 2 | 6 | 48 | 274 | 9 | 54 | 138 | 2 | 0 | 19 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.07 | 0.02 | 0.09 | 0.72 | 0.03 | 0.07 | 1.32 | 0.04 | 0.00 | 0.05 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 2 | 6 | 45 | 301 | 9 | 52 | 144 | 2 | 0 | 19 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.07 | 0.02 | 0.08 | 0.79 | 0.03 | 0.06 | 1.38 | 0.04 | 0.00 | 0.05 |
| **1 year Change - 2015 to 2016** | -1 | 0 | 9 | -27 | -3 | -3 | -15 | -1 | -1 | 0 |
| | -0.03 | 0.00 | 0.02 | -0.07 | -0.01 | 0.00 | -0.14 | -0.02 | -0.06 | 0.00 |
| **1 year Change - 2016 to 2017** | 0 | 1 | -16 | -59 | -6 | -6 | 17 | 0 | 0 | 0 |
| | 0.00 | 0.00 | -0.03 | -0.15 | -0.02 | -0.01 | 0.16 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | 0 | 12 | -37 | -2 | -4 | 23 | 0 | 0 | 1 |
| | 0.00 | 0.00 | 0.02 | -0.10 | -0.01 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | -1 | 0 | -32 | -35 | -1 | -1 | -32 | 0 | 0 | -2 |
| | -0.03 | 0.00 | -0.06 | -0.09 | 0.00 | 0.00 | -0.31 | 0.00 | 0.00 | -0.01 |
| **1 year Change - 2019 to 2020** | 0 | 0 | -3 | 27 | 0 | -2 | 6 | 0 | 0 | 0 |
| | 0.00 | 0.00 | -0.01 | 0.07 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | -2 | 1 | -30 | -131 | -12 | -16 | -1 | -1 | -1 | -1 |
| | -0.07 | 0.00 | -0.05 | -0.34 | -0.04 | -0.02 | -0.01 | -0.02 | -0.06 | 0.00 |

| Wyoming *(continued)* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **BSU ID** | Grass Creek | Greater South Pass | Hanna | Heart Mountain | Hyattville | Jackson | Little Mountain | Natrona | Newcastle |
| **Acres of PHMA & IHMA in BSU** | 154,694 | 4,610,716 | 722,920 | 128,126 | 143,869 | 48,343 | 47,919 | 2,409,472 | 109,648 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 4 | 650 | 169 | 17 | 1 | 0 | 0 | 576 | 145 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.02 | 0.09 | 0.15 | 0.08 | 0.00 | 0.00 | 0.00 | 0.15 | 0.85 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 6 | 633 | 165 | 17 | 1 | 0 | 0 | 552 | 131 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.02 | 0.09 | 0.15 | 0.08 | 0.00 | 0.00 | 0.00 | 0.15 | 0.76 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 6 | 795 | 159 | 19 | 1 | 0 | 0 | 549 | 128 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.02 | 0.11 | 0.14 | 0.09 | 0.00 | 0.00 | 0.00 | 0.15 | 0.75 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 8 | 809 | 157 | 23 | 0 | 0 | 0 | 547 | 126 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.03 | 0.11 | 0.14 | 0.11 | 0.00 | 0.00 | 0.00 | 0.15 | 0.74 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 8 | 628 | 148 | 23 | 0 | 0 | 0 | 546 | 115 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.03 | 0.09 | 0.13 | 0.11 | 0.00 | 0.00 | 0.00 | 0.15 | 0.67 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 8 | 614 | 148 | 23 | 0 | 0 | 0 | 556 | 112 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.03 | 0.09 | 0.13 | 0.11 | 0.00 | 0.00 | 0.00 | 0.15 | 0.65 |
| **1 year Change - 2015 to 2016** | 2 | -17 | -4 | 0 | 0 | 0 | 0 | -24 | -14 |
| | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | -0.08 |
| **1 year Change - 2016 to 2017** | 0 | 162 | -6 | 2 | 0 | 0 | 0 | -3 | -3 |
| | 0.00 | 0.02 | -0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | -0.02 |
| **1 year Change - 2017 to 2018** | 2 | 14 | -2 | 4 | -1 | 0 | 0 | -2 | -2 |
| | 0.01 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 |
| **1 year Change - 2018 to 2019** | 0 | -181 | -9 | 0 | 0 | 0 | 0 | -1 | -11 |
| | 0.00 | -0.03 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.06 |
| **1 year Change - 2019 to 2020** | 0 | -14 | 0 | 0 | 0 | 0 | 0 | 10 | -3 |
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.02 |
| **Overall Change - 2015 to 2020** | 4 | -36 | -21 | 6 | -1 | 0 | 0 | -20 | -33 |
| | 0.02 | 0.00 | -0.02 | 0.03 | 0.00 | 0.00 | 0.00 | -0.01 | -0.19 |

| Wyoming *(continued)* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **BSU ID** | North Gillete Connectivity | North Gillette | North Glenrock | North Laramie | Oregon Basin | Powder | Sage | Salt Wells | Seedskadee |
| **Acres of PHMA & IHMA in BSU** | 131,978 | 121,799 | 125,866 | 204,181 | 608,769 | 60,419 | 635,008 | 392,060 | 54,711 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 390 | 83 | 138 | 1 | 698 | 8 | 18 | 99 | 18 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 1.89 | 0.44 | 0.70 | 0.00 | 0.73 | 0.08 | 0.02 | 0.16 | 0.21 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 370 | 82 | 200 | 1 | 697 | 8 | 16 | 91 | 17 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 1.79 | 0.43 | 1.02 | 0.00 | 0.73 | 0.08 | 0.02 | 0.15 | 0.20 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 380 | 81 | 229 | 1 | 769 | 7 | 16 | 90 | 15 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 1.84 | 0.43 | 1.16 | 0.00 | 0.81 | 0.07 | 0.02 | 0.15 | 0.18 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 395 | 79 | 358 | 1 | 950 | 7 | 15 | 88 | 16 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 1.92 | 0.42 | 1.82 | 0.00 | 1.00 | 0.07 | 0.02 | 0.14 | 0.19 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 384 | 79 | 136 | 1 | 1,264 | 6 | 15 | 83 | 17 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 1.86 | 0.42 | 0.69 | 0.00 | 1.33 | 0.06 | 0.02 | 0.14 | 0.20 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 382 | 77 | 154 | 1 | 1,261 | 4 | 14 | 80 | 17 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 1.85 | 0.40 | 0.78 | 0.00 | 1.33 | 0.04 | 0.01 | 0.13 | 0.20 |
| **1 year Change - 2015 to 2016** | -20 | -1 | 62 | 0 | -1 | 0 | -2 | -8 | -1 |
| | -0.10 | -0.01 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | -0.01 |
| **1 year Change - 2016 to 2017** | 10 | -1 | 29 | 0 | 72 | -1 | 0 | -1 | -2 |
| | 0.05 | -0.01 | 0.15 | 0.00 | 0.08 | -0.01 | 0.00 | 0.00 | -0.02 |
| **1 year Change - 2017 to 2018** | 15 | -2 | 129 | 0 | 181 | 0 | -1 | -2 | 1 |
| | 0.07 | -0.01 | 0.66 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.01 |
| **1 year Change - 2018 to 2019** | -11 | 0 | -222 | 0 | 314 | -1 | 0 | -5 | 1 |
| | -0.05 | 0.00 | -1.13 | 0.00 | 0.33 | -0.01 | 0.00 | -0.01 | 0.01 |
| **1 year Change - 2019 to 2020** | -2 | -2 | 18 | 0 | -3 | -2 | -1 | -3 | 0 |
| | -0.01 | -0.01 | 0.09 | 0.00 | 0.00 | -0.02 | 0.00 | 0.00 | 0.00 |
| **Overall Change - 2015 to 2020** | -8 | -6 | 16 | 0 | 563 | -4 | -4 | -19 | -1 |
| | -0.04 | -0.03 | 0.08 | 0.00 | 0.59 | -0.04 | 0.00 | -0.03 | -0.01 |

| Wyoming *(continued)* | | | | | | | GRAND TOTAL ALL STATES |
|---|---|---|---|---|---|---|---|
| **BSU ID** | Shell | South Rawlins | Thermopolis | Thunder Basin | Uinta | Washakie | |
| **Acres of PHMA & IHMA in BSU** | 35,566 | 928,049 | 11,954 | 848,152 | 234,078 | 641,193 | 61,340,226 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2015** | 1 | 119 | 0 | 786 | 15 | 21 | 9,089 |
| **Density in PHMAs/IHMAs within BSUs (number per 640 Acres) 2015** | 0.02 | 0.08 | 0.00 | 0.59 | 0.04 | 0.02 | 0.10 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2016** | 1 | 118 | 0 | 741 | 13 | 19 | 8,661 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2016** | 0.02 | 0.08 | 0.00 | 0.56 | 0.04 | 0.02 | 0.10 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2017** | 1 | 113 | 0 | 727 | 12 | 19 | 8,933 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2017** | 0.02 | 0.08 | 0.00 | 0.55 | 0.03 | 0.02 | 0.10 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2018** | 1 | 108 | 0 | 737 | 13 | 22 | 9,161 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2018** | 0.02 | 0.07 | 0.00 | 0.56 | 0.04 | 0.02 | 0.10 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2019** | 2 | 101 | 0 | 687 | 13 | 24 | 8,923 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2019** | 0.04 | 0.07 | 0.00 | 0.52 | 0.04 | 0.02 | 0.10 |
| **Energy and Mining Feature Count in PHMAs/ IHMAs within BSUs 2020** | 2 | 100 | 0 | 678 | 13 | 24 | 8,969 |
| **Density in PHMAs/IHMAs within BSUs (number 640 Acres) 2020** | 0.04 | 0.07 | 0.00 | 0.51 | 0.04 | 0.02 | 0.09 |
| **1 year Change - 2015 to 2016** | 0 | -1 | 0 | -45 | -2 | -2 | -428 |
| | 0.00 | 0.00 | 0.00 | -0.03 | -0.01 | 0.00 | -0.01 |
| **1 year Change - 2016 to 2017** | 0 | -5 | 0 | -14 | -1 | 0 | 272 |
| | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2017 to 2018** | 0 | -5 | 0 | 10 | 1 | 3 | 228 |
| | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2018 to 2019** | 1 | -7 | 0 | -50 | 0 | 2 | -238 |
| | 0.02 | 0.00 | 0.00 | -0.04 | 0.00 | 0.00 | 0.00 |
| **1 year Change - 2019 to 2020** | 0 | -1 | 0 | -9 | 0 | 0 | 46 |
| | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 | 0.00 | -0.01 |
| **Overall Change - 2015 to 2020** | 1 | -19 | 0 | -108 | -2 | 3 | -120 |
| | 0.02 | -0.01 | 0.00 | -0.08 | -0.01 | 0.00 | -0.01 |

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# Appendix 6: EVT Loss by Cause and Surface Management Agency

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **1,208** | **840** | **N/A** | **0** | **N/A** | **N/A** | **2,048** |
| **Meeker/White River** | 25 | 0 | N/A | 0 | N/A | N/A | 25 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 24 | 0 | N/A | 0 | N/A | N/A | 24 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Middle Park** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Eagle/South Routt** | 18 | 2 | N/A | 0 | N/A | N/A | 20 |
| Bureau of Land Management | 2 | 1 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 1 | N/A | 0 | N/A | N/A | 17 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Park** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Colorado** | 1,160 | 837 | N/A | 0 | N/A | N/A | 1,998 |
| Bureau of Land Management | 74 | 424 | N/A | 0 | N/A | N/A | 498 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 47 | N/A | 0 | N/A | N/A | 47 |
| State | 8 | 9 | N/A | 0 | N/A | N/A | 18 |
| Private | 1,077 | 357 | N/A | 0 | N/A | N/A | 1,434 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **Parachute/Piceance/Roan** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **3,232** | **58,174** | **N/A** | **1** | **N/A** | **N/A** | **61,407** |
| **Idaho Desert Conservation Area - IHMA** | 222 | 3,924 | N/A | 0 | N/A | N/A | 4,146 |
| Bureau of Land Management | 78 | 3,110 | N/A | 0 | N/A | N/A | 3,188 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| State | 13 | 516 | N/A | 0 | N/A | N/A | 529 |
| Private | 118 | 298 | N/A | 0 | N/A | N/A | 416 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Desert Conservation Area - PHMA** | 169 | 8,590 | N/A | 0 | N/A | N/A | 8,759 |
| Bureau of Land Management | 39 | 7,212 | N/A | 0 | N/A | N/A | 7,251 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| State | 3 | 409 | N/A | 0 | N/A | N/A | 413 |
| Private | 119 | 968 | N/A | 0 | N/A | N/A | 1,087 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 387 | 28,768 | N/A | 1 | N/A | N/A | 29,156 |
| Bureau of Land Management | 75 | 19,772 | N/A | 0 | N/A | N/A | 19,847 |
| Forest Service | 1 | 2,091 | N/A | 0 | N/A | N/A | 2,092 |
| Other Federal | 19 | 685 | N/A | 0 | N/A | N/A | 704 |
| State | 58 | 1,602 | N/A | 0 | N/A | N/A | 1,660 |
| Private | 234 | 4,614 | N/A | 1 | N/A | N/A | 4,849 |
| Other | 0 | 4 | N/A | 0 | N/A | N/A | 4 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 1,012 | 101 | N/A | 0 | N/A | N/A | 1,113 |
| Bureau of Land Management | 159 | 5 | N/A | 0 | N/A | N/A | 163 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 22 | 2 | N/A | 0 | N/A | N/A | 24 |
| Private | 830 | 94 | N/A | 0 | N/A | N/A | 924 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Southern Conservation Area - IHMA** | 1,365 | 9,952 | N/A | 0 | N/A | N/A | 11,317 |
| Bureau of Land Management | 50 | 8,952 | N/A | 0 | N/A | N/A | 9,001 |
| Forest Service | 101 | 625 | N/A | 0 | N/A | N/A | 726 |
| Other Federal | 0 | 2 | N/A | 0 | N/A | N/A | 2 |
| State | 11 | 245 | N/A | 0 | N/A | N/A | 256 |
| Private | 1,204 | 128 | N/A | 0 | N/A | N/A | 1,332 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **3,232** | **58,174** | **N/A** | **1** | **N/A** | **N/A** | **61,407** |
| **Idaho Southern Conservation Area - PHMA** | 58 | 2,877 | N/A | 0 | N/A | N/A | 2,935 |
| Bureau of Land Management | 3 | 2,770 | N/A | 0 | N/A | N/A | 2,773 |
| Forest Service | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 88 | N/A | 0 | N/A | N/A | 88 |
| Private | 50 | 19 | N/A | 0 | N/A | N/A | 69 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 7 | 2,336 | N/A | 0 | N/A | N/A | 2,343 |
| Bureau of Land Management | 3 | 2,323 | N/A | 0 | N/A | N/A | 2,326 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 13 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 10 | 1,627 | N/A | 0 | N/A | N/A | 1,638 |
| Bureau of Land Management | 2 | 1,251 | N/A | 0 | N/A | N/A | 1,253 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 6 | N/A | 0 | N/A | N/A | 6 |
| State | 1 | 4 | N/A | 0 | N/A | N/A | 4 |
| Private | 8 | 366 | N/A | 0 | N/A | N/A | 374 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **16,651** | **993** | **N/A** | **0** | **N/A** | **N/A** | **17,644** |
| **Dakotas** | 2,613 | 292 | N/A | 0 | N/A | N/A | 2,905 |
| Bureau of Land Management | 13 | 0 | N/A | 0 | N/A | N/A | 13 |
| Forest Service | 14 | 88 | N/A | 0 | N/A | N/A | 102 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Private | 2,511 | 203 | N/A | 0 | N/A | N/A | 2,715 |
| Other | 32 | 0 | N/A | 0 | N/A | N/A | 32 |
| **Northern Montana** | 2,514 | 0 | N/A | 0 | N/A | N/A | 2,515 |
| Bureau of Land Management | 449 | 0 | N/A | 0 | N/A | N/A | 450 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 123 | 0 | N/A | 0 | N/A | N/A | 123 |
| Private | 1,940 | 0 | N/A | 0 | N/A | N/A | 1,940 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Powder River Basin** | 54 | 1 | N/A | 0 | N/A | N/A | 55 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 54 | 1 | N/A | 0 | N/A | N/A | 55 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **SW Montana Conservation Area** | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Bureau of Land Management | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Wyoming Basin** | 137 | 0 | N/A | 0 | N/A | N/A | 137 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 133 | 0 | N/A | 0 | N/A | N/A | 133 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Yellowstone Watershed** | 11,315 | 699 | N/A | 0 | N/A | N/A | 12,015 |
| Bureau of Land Management | 263 | 454 | N/A | 0 | N/A | N/A | 717 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| State | 479 | 65 | N/A | 0 | N/A | N/A | 544 |
| Private | 10,556 | 180 | N/A | 0 | N/A | N/A | 10,736 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **824** | **9,304** | **N/A** | **0** | **N/A** | **N/A** | **10,128** |
| **Black Rock** | 3 | 3 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 0 | 2 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 2 | 1 | N/A | 0 | N/A | N/A | 3 |
| **Butte/Buck/White Pine** | 26 | 0 | N/A | 0 | N/A | N/A | 26 |
| Bureau of Land Management | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Elko** | 45 | 582 | N/A | 0 | N/A | N/A | 627 |
| Bureau of Land Management | 3 | 279 | N/A | 0 | N/A | N/A | 283 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 42 | 302 | N/A | 0 | N/A | N/A | 344 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Great Basin** | 13 | 368 | N/A | 0 | N/A | N/A | 381 |
| Bureau of Land Management | 8 | 364 | N/A | 0 | N/A | N/A | 372 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 5 | 4 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **East High Desert** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lassen/South Washoe** | 27 | 1,118 | N/A | 0 | N/A | N/A | 1,144 |
| Bureau of Land Management | 2 | 678 | N/A | 0 | N/A | N/A | 680 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 402 | N/A | 0 | N/A | N/A | 402 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 25 | 38 | N/A | 0 | N/A | N/A | 63 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **824** | **9,304** | **N/A** | **0** | **N/A** | **N/A** | **10,128** |
| **Likely Tables PMU** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lone Willow** | 30 | 300 | N/A | 0 | N/A | N/A | 330 |
| Bureau of Land Management | 10 | 300 | N/A | 0 | N/A | N/A | 310 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| **Monitor** | 2 | 2 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 2 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northeast Elko** | 1 | 30 | N/A | 0 | N/A | N/A | 32 |
| Bureau of Land Management | 1 | 27 | N/A | 0 | N/A | N/A | 28 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 3 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Great Basin (NV)** | 31 | 969 | N/A | 0 | N/A | N/A | 1,000 |
| Bureau of Land Management | 0 | 236 | N/A | 0 | N/A | N/A | 236 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 710 | N/A | 0 | N/A | N/A | 710 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 31 | 22 | N/A | 0 | N/A | N/A | 53 |
| **Northwest Interior** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **824** | **9,304** | **N/A** | **0** | **N/A** | **N/A** | **10,128** |
| **Owyhee** | 100 | 3,936 | N/A | 0 | N/A | N/A | 4,035 |
| Bureau of Land Management | 11 | 2,048 | N/A | 0 | N/A | N/A | 2,059 |
| Forest Service | 0 | 12 | N/A | 0 | N/A | N/A | 12 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 88 | 1,875 | N/A | 0 | N/A | N/A | 1,964 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblo Range** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| **Ruby** | 447 | 1,987 | N/A | 0 | N/A | N/A | 2,435 |
| Bureau of Land Management | 263 | 417 | N/A | 0 | N/A | N/A | 681 |
| Forest Service | 0 | 373 | N/A | 0 | N/A | N/A | 373 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 183 | 1,196 | N/A | 0 | N/A | N/A | 1,380 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Smith/Reese** | 92 | 1 | N/A | 0 | N/A | N/A | 93 |
| Bureau of Land Management | 5 | 1 | N/A | 0 | N/A | N/A | 7 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 87 | 0 | N/A | 0 | N/A | N/A | 87 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Southeastern Nevada** | 0 | 8 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 0 | 8 | N/A | 0 | N/A | N/A | 8 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Western Pershing** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **1,212** | **18,090** | **N/A** | **1** | **N/A** | **N/A** | **19,304** |
| **Baker** | 184 | 85 | N/A | 0 | N/A | N/A | 269 |
| Bureau of Land Management | 12 | 76 | N/A | 0 | N/A | N/A | 89 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 171 | 9 | N/A | 0 | N/A | N/A | 181 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Beatys** | 1 | 937 | N/A | 0 | N/A | N/A | 937 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 937 | N/A | 0 | N/A | N/A | 937 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Brothers/N Wagontire** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Bully Creek** | 85 | 169 | N/A | 1 | N/A | N/A | 255 |
| Bureau of Land Management | 16 | 53 | N/A | 0 | N/A | N/A | 69 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 69 | 116 | N/A | 1 | N/A | N/A | 186 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Burns** | 1 | 214 | N/A | 0 | N/A | N/A | 215 |
| Bureau of Land Management | 0 | 144 | N/A | 0 | N/A | N/A | 144 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 69 | N/A | 0 | N/A | N/A | 70 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Cow Lakes** | 218 | 113 | N/A | 0 | N/A | N/A | 331 |
| Bureau of Land Management | 17 | 105 | N/A | 0 | N/A | N/A | 121 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 4 | N/A | 0 | N/A | N/A | 4 |
| Private | 201 | 4 | N/A | 0 | N/A | N/A | 205 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,212** | **18,090** | **N/A** | **1** | **N/A** | **N/A** | **19,304** |
| **Cow Valley** | 618 | 459 | N/A | 0 | N/A | N/A | 1,077 |
| Bureau of Land Management | 1 | 25 | N/A | 0 | N/A | N/A | 25 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 617 | 435 | N/A | 0 | N/A | N/A | 1,052 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Crowley** | 6 | 2,528 | N/A | 0 | N/A | N/A | 2,534 |
| Bureau of Land Management | 0 | 2,403 | N/A | 0 | N/A | N/A | 2,403 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 125 | N/A | 0 | N/A | N/A | 132 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Drewsey** | 6 | 52 | N/A | 0 | N/A | N/A | 58 |
| Bureau of Land Management | 0 | 49 | N/A | 0 | N/A | N/A | 50 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 2 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Dry Valley/Jack Mountain** | 0 | 58 | N/A | 0 | N/A | N/A | 58 |
| Bureau of Land Management | 0 | 56 | N/A | 0 | N/A | N/A | 56 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 2 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Folly Farm/Saddle Butte** | 0 | 184 | N/A | 0 | N/A | N/A | 184 |
| Bureau of Land Management | 0 | 78 | N/A | 0 | N/A | N/A | 78 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 107 | N/A | 0 | N/A | N/A | 107 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Louse Canyon** | 0 | 7,686 | N/A | 0 | N/A | N/A | 7,686 |
| Bureau of Land Management | 0 | 7,671 | N/A | 0 | N/A | N/A | 7,671 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 14 | N/A | 0 | N/A | N/A | 14 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,212** | **18,090** | **N/A** | **1** | **N/A** | **N/A** | **19,304** |
| **Paulina/12 Mile/Misery Flat** | 20 | 2 | N/A | 0 | N/A | N/A | 22 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 2 | N/A | 0 | N/A | N/A | 2 |
| Private | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Picture Rock** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblos/S Steens** | 0 | 1 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 1 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Soldier Creek** | 34 | 5,002 | N/A | 0 | N/A | N/A | 5,037 |
| Bureau of Land Management | 9 | 4,977 | N/A | 0 | N/A | N/A | 4,986 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 25 | 25 | N/A | 0 | N/A | N/A | 50 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Steens** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Trout Creeks** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,212** | **18,090** | **N/A** | **1** | **N/A** | **N/A** | **19,304** |
| **Tucker Hill** | 24 | 0 | N/A | 0 | N/A | N/A | 24 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Warners** | 2 | 600 | N/A | 0 | N/A | N/A | 602 |
| Bureau of Land Management | 2 | 542 | N/A | 0 | N/A | N/A | 544 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 58 | N/A | 0 | N/A | N/A | 58 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **1,340** | **7,579** | **N/A** | **7** | **N/A** | **N/A** | **8,927** |
| **Bald Hills** | 85 | 386 | N/A | 0 | N/A | N/A | 471 |
| Bureau of Land Management | 23 | 345 | N/A | 0 | N/A | N/A | 368 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 41 | N/A | 0 | N/A | N/A | 41 |
| Private | 62 | 0 | N/A | 0 | N/A | N/A | 62 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Box Elder** | 1,004 | 6,518 | N/A | 7 | N/A | N/A | 7,529 |
| Bureau of Land Management | 131 | 932 | N/A | 2 | N/A | N/A | 1,066 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 34 | 445 | N/A | 0 | N/A | N/A | 480 |
| Private | 838 | 5,141 | N/A | 5 | N/A | N/A | 5,984 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Carbon** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Emery** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hamlin Valley** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ibapah** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **1,340** | **7,579** | **N/A** | **7** | **N/A** | **N/A** | **8,927** |
| **Panguitch** | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Parker Mtn** | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Raft River** | 0 | 72 | N/A | 0 | N/A | N/A | 72 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 72 | N/A | 0 | N/A | N/A | 72 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Rich County** | 53 | 121 | N/A | 0 | N/A | N/A | 173 |
| Bureau of Land Management | 3 | 6 | N/A | 0 | N/A | N/A | 9 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 1 | 30 | N/A | 0 | N/A | N/A | 31 |
| Private | 48 | 85 | N/A | 0 | N/A | N/A | 133 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sheeprocks** | 161 | 266 | N/A | 0 | N/A | N/A | 427 |
| Bureau of Land Management | 33 | 229 | N/A | 0 | N/A | N/A | 262 |
| Forest Service | 2 | 1 | N/A | 0 | N/A | N/A | 3 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 33 | N/A | 0 | N/A | N/A | 35 |
| Private | 125 | 2 | N/A | 0 | N/A | N/A | 127 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Strawberry** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **1,340** | **7,579** | **N/A** | **7** | **N/A** | **N/A** | **8,927** |
| **Uintah-Diamond Mtn** | 7 | 216 | N/A | 0 | N/A | N/A | 223 |
| Bureau of Land Management | 3 | 73 | N/A | 0 | N/A | N/A | 76 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 36 | N/A | 0 | N/A | N/A | 38 |
| Private | 2 | 107 | N/A | 0 | N/A | N/A | 109 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Bear River** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Blacks Fork** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo** | 22 | 314 | N/A | 0 | N/A | N/A | 336 |
| Bureau of Land Management | 0 | 71 | N/A | 0 | N/A | N/A | 71 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 22 | 244 | N/A | 0 | N/A | N/A | 265 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo Connectivity** | 61 | 328 | N/A | 0 | N/A | N/A | 389 |
| Bureau of Land Management | 1 | 96 | N/A | 0 | N/A | N/A | 97 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 60 | 232 | N/A | 0 | N/A | N/A | 292 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Continental Divide** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Daniel** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Douglas** | 161 | 151 | N/A | 0 | N/A | N/A | 313 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 160 | 151 | N/A | 0 | N/A | N/A | 312 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin East** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin West** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Fontenelle** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Grass Creek** | 2 | 1 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 1 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Greater South Pass** | 663 | 39 | N/A | 0 | N/A | N/A | 703 |
| Bureau of Land Management | 9 | 33 | N/A | 0 | N/A | N/A | 42 |
| Forest Service | 0 | 2 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 7 | 5 | N/A | 0 | N/A | N/A | 12 |
| Private | 646 | 0 | N/A | 0 | N/A | N/A | 646 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Hanna** | 33 | 0 | N/A | 0 | N/A | N/A | 33 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 28 | 0 | N/A | 0 | N/A | N/A | 28 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **Heart Mountain** | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hyattville** | 18 | 4 | N/A | 0 | N/A | N/A | 22 |
| Bureau of Land Management | 1 | 1 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 17 | 2 | N/A | 0 | N/A | N/A | 19 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Jackson** | 0 | 27 | N/A | 0 | N/A | N/A | 27 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 27 | N/A | 0 | N/A | N/A | 27 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Little Mountain** | 1 | 86 | N/A | 0 | N/A | N/A | 87 |
| Bureau of Land Management | 0 | 86 | N/A | 0 | N/A | N/A | 86 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Natrona** | 249 | 1,149 | N/A | 0 | N/A | N/A | 1,398 |
| Bureau of Land Management | 51 | 435 | N/A | 0 | N/A | N/A | 485 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 7 | 405 | N/A | 0 | N/A | N/A | 412 |
| Private | 191 | 309 | N/A | 0 | N/A | N/A | 501 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Newcastle** | 9 | 224 | N/A | 0 | N/A | N/A | 232 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 93 | N/A | 0 | N/A | N/A | 94 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 103 | N/A | 0 | N/A | N/A | 103 |
| Private | 8 | 27 | N/A | 0 | N/A | N/A | 35 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillete Connectivity** | 119 | 559 | N/A | 0 | N/A | N/A | 678 |
| Bureau of Land Management | 16 | 112 | N/A | 0 | N/A | N/A | 127 |
| Forest Service | 2 | 23 | N/A | 0 | N/A | N/A | 26 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 332 | N/A | 0 | N/A | N/A | 337 |
| Private | 95 | 92 | N/A | 0 | N/A | N/A | 187 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **North Gillette** | 74 | 15 | N/A | 0 | N/A | N/A | 89 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 16 | 15 | N/A | 0 | N/A | N/A | 31 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 55 | 0 | N/A | 0 | N/A | N/A | 55 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Glenrock** | 0 | 281 | N/A | 0 | N/A | N/A | 281 |
| Bureau of Land Management | 0 | 132 | N/A | 0 | N/A | N/A | 132 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 23 | N/A | 0 | N/A | N/A | 23 |
| Private | 0 | 126 | N/A | 0 | N/A | N/A | 126 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Laramie** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Oregon Basin** | 40 | 8 | N/A | 0 | N/A | N/A | 48 |
| Bureau of Land Management | 9 | 7 | N/A | 0 | N/A | N/A | 16 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Private | 22 | 1 | N/A | 0 | N/A | N/A | 23 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Powder** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sage** | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Salt Wells** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Seedskadee** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Shell** | 82 | 70 | N/A | 0 | N/A | N/A | 152 |
| Bureau of Land Management | 1 | 68 | N/A | 0 | N/A | N/A | 70 |
| Forest Service | 0 | 1 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 81 | 1 | N/A | 0 | N/A | N/A | 82 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **South Rawlins** | 31 | 1 | N/A | 0 | N/A | N/A | 32 |
| Bureau of Land Management | 0 | 1 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2012 - 2013<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,822** | **4,839** | **N/A** | **10** | **N/A** | **N/A** | **6,671** |
| **Thermopolis** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Thunder Basin** | 234 | 639 | N/A | 0 | N/A | N/A | 872 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 5 | 348 | N/A | 0 | N/A | N/A | 352 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Private | 221 | 291 | N/A | 0 | N/A | N/A | 512 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Uinta** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Washakie** | 6 | 942 | N/A | 0 | N/A | N/A | 948 |
| Bureau of Land Management | 0 | 532 | N/A | 0 | N/A | N/A | 532 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 6 | N/A | 0 | N/A | N/A | 6 |
| Private | 6 | 405 | N/A | 0 | N/A | N/A | 410 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **GRAND TOTAL ALL STATES** | **26,641** | **100,277** | **N/A** | **10** | **N/A** | **N/A** | **126,928** |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **1,478** | **11,810** | **N/A** | **1** | **N/A** | **N/A** | **13,289** |
| **Meeker/White River** | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Middle Park** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Eagle/South Routt** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Park** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Colorado** | 1,444 | 11,810 | N/A | 1 | N/A | N/A | 13,255 |
| Bureau of Land Management | 117 | 3,923 | N/A | 1 | N/A | N/A | 4,041 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 31 | 554 | N/A | 0 | N/A | N/A | 586 |
| Private | 1,296 | 7,332 | N/A | 0 | N/A | N/A | 8,628 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Parachute/Piceance/Roan** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **1,386** | **17,323** | **N/A** | **124** | **N/A** | **N/A** | **18,833** |
| **Idaho Desert Conservation Area - IHMA** | 215 | 2 | N/A | 0 | N/A | N/A | 217 |
| Bureau of Land Management | 10 | 2 | N/A | 0 | N/A | N/A | 13 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 197 | 0 | N/A | 0 | N/A | N/A | 197 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Desert Conservation Area - PHMA** | 112 | 16,828 | N/A | 124 | N/A | N/A | 17,064 |
| Bureau of Land Management | 27 | 14,900 | N/A | 9 | N/A | N/A | 14,937 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| State | 1 | 1,516 | N/A | 2 | N/A | N/A | 1,519 |
| Private | 75 | 412 | N/A | 113 | N/A | N/A | 599 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 89 | 0 | N/A | 0 | N/A | N/A | 89 |
| Bureau of Land Management | 15 | 0 | N/A | 0 | N/A | N/A | 15 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Private | 61 | 0 | N/A | 0 | N/A | N/A | 61 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 353 | 0 | N/A | 0 | N/A | N/A | 353 |
| Bureau of Land Management | 62 | 0 | N/A | 0 | N/A | N/A | 62 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 283 | 0 | N/A | 0 | N/A | N/A | 283 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Southern Conservation Area - IHMA** | 575 | 0 | N/A | 0 | N/A | N/A | 575 |
| Bureau of Land Management | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Forest Service | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 496 | 0 | N/A | 0 | N/A | N/A | 496 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **1,386** | **17,323** | **N/A** | **124** | **N/A** | **N/A** | **18,833** |
| **Idaho Southern Conservation Area - PHMA** | 27 | 36 | N/A | 0 | N/A | N/A | 63 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 35 | N/A | 0 | N/A | N/A | 35 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 25 | 0 | N/A | 0 | N/A | N/A | 25 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 11 | 89 | N/A | 0 | N/A | N/A | 100 |
| Bureau of Land Management | 5 | 89 | N/A | 0 | N/A | N/A | 94 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 4 | 368 | N/A | 0 | N/A | N/A | 372 |
| Bureau of Land Management | 1 | 100 | N/A | 0 | N/A | N/A | 101 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 261 | N/A | 0 | N/A | N/A | 261 |
| Private | 4 | 7 | N/A | 0 | N/A | N/A | 11 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **65,077** | **7,599** | **N/A** | **6** | **N/A** | **N/A** | **72,682** |
| **Dakotas** | 1,818 | 0 | N/A | 0 | N/A | N/A | 1,818 |
| Bureau of Land Management | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Forest Service | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 65 | 0 | N/A | 0 | N/A | N/A | 65 |
| Private | 1,705 | 0 | N/A | 0 | N/A | N/A | 1,705 |
| Other | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| **Northern Montana** | 10,335 | 0 | N/A | 0 | N/A | N/A | 10,335 |
| Bureau of Land Management | 2,026 | 0 | N/A | 0 | N/A | N/A | 2,026 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| State | 406 | 0 | N/A | 0 | N/A | N/A | 406 |
| Private | 7,874 | 0 | N/A | 0 | N/A | N/A | 7,874 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Powder River Basin** | 139 | 0 | N/A | 0 | N/A | N/A | 139 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 134 | 0 | N/A | 0 | N/A | N/A | 134 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **SW Montana Conservation Area** | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Wyoming Basin** | 718 | 0 | N/A | 0 | N/A | N/A | 718 |
| Bureau of Land Management | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Private | 687 | 0 | N/A | 0 | N/A | N/A | 687 |
| Other | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| **Yellowstone Watershed** | 52,037 | 7,599 | N/A | 6 | N/A | N/A | 59,642 |
| Bureau of Land Management | 4,804 | 1,233 | N/A | 0 | N/A | N/A | 6,037 |
| Forest Service | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 238 | 0 | N/A | 0 | N/A | N/A | 238 |
| State | 2,671 | 477 | N/A | 0 | N/A | N/A | 3,148 |
| Private | 44,319 | 5,889 | N/A | 6 | N/A | N/A | 50,213 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **729** | **2,229** | **N/A** | **0** | **N/A** | **N/A** | **2,958** |
| **Black Rock** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Butte/Buck/White Pine** | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Elko** | 53 | 0 | N/A | 0 | N/A | N/A | 53 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 45 | 0 | N/A | 0 | N/A | N/A | 45 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Great Basin** | 24 | 0 | N/A | 0 | N/A | N/A | 24 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **East High Desert** | 0 | 2,209 | N/A | 0 | N/A | N/A | 2,209 |
| Bureau of Land Management | 0 | 2,209 | N/A | 0 | N/A | N/A | 2,209 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lassen/South Washoe** | 46 | 0 | N/A | 0 | N/A | N/A | 46 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 45 | 0 | N/A | 0 | N/A | N/A | 45 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **729** | **2,229** | **N/A** | **0** | **N/A** | **N/A** | **2,958** |
| **Likely Tables PMU** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lone Willow** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| **Monitor** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northeast Elko** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Great Basin (NV)** | 116 | 0 | N/A | 0 | N/A | N/A | 116 |
| Bureau of Land Management | 58 | 0 | N/A | 0 | N/A | N/A | 58 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 58 | 0 | N/A | 0 | N/A | N/A | 58 |
| **Northwest Interior** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **729** | **2,229** | **N/A** | **0** | **N/A** | **N/A** | **2,958** |
| **Owyhee** | 48 | 19 | N/A | 0 | N/A | N/A | 67 |
| Bureau of Land Management | 4 | 19 | N/A | 0 | N/A | N/A | 23 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 43 | 0 | N/A | 0 | N/A | N/A | 43 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblo Range** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ruby** | 416 | 0 | N/A | 0 | N/A | N/A | 417 |
| Bureau of Land Management | 234 | 0 | N/A | 0 | N/A | N/A | 234 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 182 | 0 | N/A | 0 | N/A | N/A | 182 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Smith/Reese** | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Southeastern Nevada** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Western Pershing** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **499** | **104,203** | **N/A** | **16** | **N/A** | **N/A** | **104,718** |
| **Baker** | 95 | 1,537 | N/A | 0 | N/A | N/A | 1,631 |
| Bureau of Land Management | 2 | 66 | N/A | 0 | N/A | N/A | 68 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 92 | 1,471 | N/A | 0 | N/A | N/A | 1,563 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Beatys** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Brothers/N Wagontire** | 132 | 0 | N/A | 0 | N/A | N/A | 132 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 132 | 0 | N/A | 0 | N/A | N/A | 132 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Bully Creek** | 15 | 2,756 | N/A | 0 | N/A | N/A | 2,772 |
| Bureau of Land Management | 4 | 839 | N/A | 0 | N/A | N/A | 843 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 11 | 1,917 | N/A | 0 | N/A | N/A | 1,929 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Burns** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Cow Lakes** | 41 | 0 | N/A | 0 | N/A | N/A | 41 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 38 | 0 | N/A | 0 | N/A | N/A | 38 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **499** | **104,203** | **N/A** | **16** | **N/A** | **N/A** | **104,718** |
| **Cow Valley** | 176 | 9,543 | N/A | 16 | N/A | N/A | 9,736 |
| Bureau of Land Management | 15 | 1,469 | N/A | 1 | N/A | N/A | 1,484 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 161 | 8,074 | N/A | 15 | N/A | N/A | 8,251 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Crowley** | 14 | 78,489 | N/A | 0 | N/A | N/A | 78,504 |
| Bureau of Land Management | 0 | 52,111 | N/A | 0 | N/A | N/A | 52,111 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 639 | N/A | 0 | N/A | N/A | 639 |
| Private | 14 | 25,739 | N/A | 0 | N/A | N/A | 25,754 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Drewsey** | 4 | 1,696 | N/A | 0 | N/A | N/A | 1,700 |
| Bureau of Land Management | 1 | 1,275 | N/A | 0 | N/A | N/A | 1,276 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 421 | N/A | 0 | N/A | N/A | 424 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Dry Valley/Jack Mountain** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Folly Farm/Saddle Butte** | 0 | 3,287 | N/A | 0 | N/A | N/A | 3,288 |
| Bureau of Land Management | 0 | 780 | N/A | 0 | N/A | N/A | 780 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 2,363 | N/A | 0 | N/A | N/A | 2,363 |
| Private | 0 | 144 | N/A | 0 | N/A | N/A | 145 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Louse Canyon** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **499** | **104,203** | **N/A** | **16** | **N/A** | **N/A** | **104,718** |
| **Paulina/12 Mile/Misery Flat** | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Picture Rock** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblos/S Steens** | 0 | 3,375 | N/A | 0 | N/A | N/A | 3,375 |
| Bureau of Land Management | 0 | 3,080 | N/A | 0 | N/A | N/A | 3,080 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 295 | N/A | 0 | N/A | N/A | 295 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Soldier Creek** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Steens** | 0 | 3,519 | N/A | 0 | N/A | N/A | 3,519 |
| Bureau of Land Management | 0 | 3,519 | N/A | 0 | N/A | N/A | 3,519 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Trout Creeks** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **499** | **104,203** | **N/A** | **16** | **N/A** | **N/A** | **104,718** |
| **Tucker Hill** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Warners** | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **15** | **0** | **N/A** | **0** | **N/A** | **N/A** | **15** |
| **Bald Hills** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 236 | 0 | N/A | 0 | N/A | N/A | 236 |
| **Box Elder** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 225 | 0 | N/A | 0 | N/A | N/A | 225 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Carbon** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Emery** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hamlin Valley** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **Ibapah** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **15** | **0** | **N/A** | **0** | **N/A** | **N/A** | **15** |
| **Panguitch** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Parker Mtn** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Raft River** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Rich County** | 21 | 0 | N/A | 0 | N/A | N/A | 21 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sheeprocks** | 91 | 1,738 | N/A | 0 | N/A | N/A | 1,829 |
| Bureau of Land Management | 4 | 1,263 | N/A | 0 | N/A | N/A | 1,268 |
| Forest Service | 1 | 379 | N/A | 0 | N/A | N/A | 381 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 95 | N/A | 0 | N/A | N/A | 95 |
| Private | 86 | 0 | N/A | 0 | N/A | N/A | 86 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Strawberry** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **15** | **0** | **N/A** | **0** | **N/A** | **N/A** | **15** |
| **Uintah-Diamond Mtn** | 5 | 240 | N/A | 0 | N/A | N/A | 245 |
| Bureau of Land Management | 0 | 185 | N/A | 0 | N/A | N/A | 185 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 55 | N/A | 0 | N/A | N/A | 60 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Bear River** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Blacks Fork** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo** | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo Connectivity** | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Continental Divide** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Daniel** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Douglas** | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin East** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin West** | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Fontenelle** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Grass Creek** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Greater South Pass** | 187 | 0 | N/A | 0 | N/A | N/A | 187 |
| Bureau of Land Management | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 180 | 0 | N/A | 0 | N/A | N/A | 180 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Hanna** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Heart Mountain** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hyattville** | 5 | 207 | N/A | 0 | N/A | N/A | 212 |
| Bureau of Land Management | 0 | 202 | N/A | 0 | N/A | N/A | 203 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 4 | N/A | 0 | N/A | N/A | 5 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Jackson** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Little Mountain** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Natrona** | 73 | 0 | N/A | 0 | N/A | N/A | 73 |
| Bureau of Land Management | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 62 | 0 | N/A | 0 | N/A | N/A | 62 |
| Other | 2 | 0 | N/A | 0 | N/A | N/A | 2 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Newcastle** | 34 | 0 | N/A | 0 | N/A | N/A | 34 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillete Connectivity** | 13 | 0 | N/A | 0 | N/A | N/A | 13 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillette** | 27 | 0 | N/A | 0 | N/A | N/A | 27 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Glenrock** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Laramie** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Oregon Basin** | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Powder** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sage** | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Salt Wells** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Seedskadee** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Shell** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **South Rawlins** | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2013 - 2014<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **807** | **207** | **N/A** | **0** | **N/A** | **N/A** | **1,013** |
| **Thermopolis** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Thunder Basin** | 328 | 0 | N/A | 0 | N/A | N/A | 328 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Private | 313 | 0 | N/A | 0 | N/A | N/A | 313 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Uinta** | 32 | 0 | N/A | 0 | N/A | N/A | 32 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 29 | 0 | N/A | 0 | N/A | N/A | 29 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Washakie** | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **GRAND TOTAL ALL STATES** | **71,005** | **145,479** | **N/A** | **147** | **N/A** | **N/A** | **216,631** |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **541** | **770** | **N/A** | **0** | **N/A** | **N/A** | **1,311** |
| **Meeker/White River** | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Middle Park** | 1 | 111 | N/A | 0 | N/A | N/A | 112 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 111 | N/A | 0 | N/A | N/A | 111 |
| **North Eagle/South Routt** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Park** | 2 | 109 | N/A | 0 | N/A | N/A | 110 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 100 | N/A | 0 | N/A | N/A | 101 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 8 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Colorado** | 515 | 550 | N/A | 0 | N/A | N/A | 1,065 |
| Bureau of Land Management | 26 | 501 | N/A | 0 | N/A | N/A | 527 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 10 | 28 | N/A | 0 | N/A | N/A | 38 |
| Private | 479 | 20 | N/A | 0 | N/A | N/A | 499 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **Parachute/Piceance/Roan** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **2,628** | **94,715** | **N/A** | **5** | **N/A** | **N/A** | **97,347** |
| **Idaho Desert Conservation Area - IHMA** | 176 | 490 | N/A | 0 | N/A | N/A | 666 |
| Bureau of Land Management | 81 | 488 | N/A | 0 | N/A | N/A | 569 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 3 | 2 | N/A | 0 | N/A | N/A | 4 |
| Private | 92 | 0 | N/A | 0 | N/A | N/A | 92 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Desert Conservation Area - PHMA** | 294 | 1 | N/A | 0 | N/A | N/A | 295 |
| Bureau of Land Management | 60 | 1 | N/A | 0 | N/A | N/A | 61 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 230 | 0 | N/A | 0 | N/A | N/A | 230 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 408 | 3 | N/A | 0 | N/A | N/A | 411 |
| Bureau of Land Management | 30 | 2 | N/A | 0 | N/A | N/A | 32 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Private | 356 | 1 | N/A | 0 | N/A | N/A | 357 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 788 | 32 | N/A | 0 | N/A | N/A | 820 |
| Bureau of Land Management | 52 | 0 | N/A | 0 | N/A | N/A | 52 |
| Forest Service | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Private | 711 | 32 | N/A | 0 | N/A | N/A | 743 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Southern Conservation Area - IHMA** | 832 | 131 | N/A | 0 | N/A | N/A | 963 |
| Bureau of Land Management | 153 | 39 | N/A | 0 | N/A | N/A | 192 |
| Forest Service | 64 | 0 | N/A | 0 | N/A | N/A | 64 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 4 | 19 | N/A | 0 | N/A | N/A | 24 |
| Private | 609 | 73 | N/A | 0 | N/A | N/A | 681 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **2,628** | **94,715** | **N/A** | **5** | **N/A** | **N/A** | **97,347** |
| **Idaho Southern Conservation Area - PHMA** | 102 | 12 | N/A | 0 | N/A | N/A | 113 |
| Bureau of Land Management | 31 | 12 | N/A | 0 | N/A | N/A | 42 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Private | 66 | 0 | N/A | 0 | N/A | N/A | 66 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 7 | 72,577 | N/A | 3 | N/A | N/A | 72,588 |
| Bureau of Land Management | 4 | 59,579 | N/A | 0 | N/A | N/A | 59,583 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 3,660 | N/A | 0 | N/A | N/A | 3,660 |
| Private | 3 | 9,339 | N/A | 3 | N/A | N/A | 9,345 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 22 | 21,469 | N/A | 1 | N/A | N/A | 21,491 |
| Bureau of Land Management | 7 | 16,304 | N/A | 0 | N/A | N/A | 16,312 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 1 | 1,044 | N/A | 0 | N/A | N/A | 1,045 |
| Private | 12 | 4,120 | N/A | 1 | N/A | N/A | 4,133 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **35,270** | **2,814** | **N/A** | **2** | **N/A** | **N/A** | **38,086** |
| **Dakotas** | 2,054 | 289 | N/A | 0 | N/A | N/A | 2,343 |
| Bureau of Land Management | 11 | 0 | N/A | 0 | N/A | N/A | 11 |
| Forest Service | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 33 | 0 | N/A | 0 | N/A | N/A | 33 |
| Private | 1,994 | 289 | N/A | 0 | N/A | N/A | 2,283 |
| Other | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| **Northern Montana** | 9,064 | 0 | N/A | 0 | N/A | N/A | 9,064 |
| Bureau of Land Management | 2,041 | 0 | N/A | 0 | N/A | N/A | 2,041 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| State | 404 | 0 | N/A | 0 | N/A | N/A | 404 |
| Private | 6,599 | 0 | N/A | 0 | N/A | N/A | 6,599 |
| Other | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| **Powder River Basin** | 82 | 1,884 | N/A | 0 | N/A | N/A | 1,966 |
| Bureau of Land Management | 1 | 10 | N/A | 0 | N/A | N/A | 11 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 4 | 4 | N/A | 0 | N/A | N/A | 7 |
| Private | 77 | 1,870 | N/A | 0 | N/A | N/A | 1,947 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **SW Montana Conservation Area** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Wyoming Basin** | 471 | 0 | N/A | 0 | N/A | N/A | 471 |
| Bureau of Land Management | 40 | 0 | N/A | 0 | N/A | N/A | 40 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| State | 24 | 0 | N/A | 0 | N/A | N/A | 24 |
| Private | 404 | 0 | N/A | 0 | N/A | N/A | 404 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Yellowstone Watershed** | 23,594 | 642 | N/A | 2 | N/A | N/A | 24,237 |
| Bureau of Land Management | 1,724 | 352 | N/A | 0 | N/A | N/A | 2,077 |
| Forest Service | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other Federal | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| State | 963 | 58 | N/A | 0 | N/A | N/A | 1,022 |
| Private | 20,884 | 231 | N/A | 1 | N/A | N/A | 21,116 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **771** | **792** | **N/A** | **0** | **N/A** | **N/A** | **1,563** |
| **Black Rock** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Butte/Buck/White Pine** | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Elko** | 15 | 97 | N/A | 0 | N/A | N/A | 112 |
| Bureau of Land Management | 0 | 40 | N/A | 0 | N/A | N/A | 40 |
| Forest Service | 5 | 41 | N/A | 0 | N/A | N/A | 46 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 10 | 15 | N/A | 0 | N/A | N/A | 25 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Great Basin** | 13 | 128 | N/A | 0 | N/A | N/A | 141 |
| Bureau of Land Management | 6 | 128 | N/A | 0 | N/A | N/A | 133 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **East High Desert** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lassen/South Washoe** | 42 | 143 | N/A | 0 | N/A | N/A | 185 |
| Bureau of Land Management | 2 | 117 | N/A | 0 | N/A | N/A | 119 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 40 | 26 | N/A | 0 | N/A | N/A | 66 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **771** | **792** | **N/A** | **0** | **N/A** | **N/A** | **1,563** |
| **Likely Tables PMU** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lone Willow** | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| **Monitor** | 13 | 0 | N/A | 0 | N/A | N/A | 13 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northeast Elko** | 0 | 61 | N/A | 0 | N/A | N/A | 61 |
| Bureau of Land Management | 0 | 55 | N/A | 0 | N/A | N/A | 55 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 6 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Great Basin (NV)** | 131 | 0 | N/A | 0 | N/A | N/A | 131 |
| Bureau of Land Management | 35 | 0 | N/A | 0 | N/A | N/A | 35 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 95 | 0 | N/A | 0 | N/A | N/A | 95 |
| **Northwest Interior** | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Bureau of Land Management | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **771** | **792** | **N/A** | **0** | **N/A** | **N/A** | **1,563** |
| **Owyhee** | 28 | 176 | N/A | 0 | N/A | N/A | 204 |
| Bureau of Land Management | 2 | 122 | N/A | 0 | N/A | N/A | 123 |
| Forest Service | 1 | 3 | N/A | 0 | N/A | N/A | 4 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 25 | 52 | N/A | 0 | N/A | N/A | 77 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblo Range** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ruby** | 33 | 60 | N/A | 0 | N/A | N/A | 93 |
| Bureau of Land Management | 3 | 5 | N/A | 0 | N/A | N/A | 9 |
| Forest Service | 0 | 17 | N/A | 0 | N/A | N/A | 18 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 30 | 37 | N/A | 0 | N/A | N/A | 67 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Smith/Reese** | 414 | 127 | N/A | 0 | N/A | N/A | 542 |
| Bureau of Land Management | 291 | 127 | N/A | 0 | N/A | N/A | 419 |
| Forest Service | 29 | 0 | N/A | 0 | N/A | N/A | 29 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 94 | 0 | N/A | 0 | N/A | N/A | 94 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Southeastern Nevada** | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Western Pershing** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **872** | **40,240** | **N/A** | **4** | **N/A** | **N/A** | **41,116** |
| **Baker** | 164 | 0 | N/A | 0 | N/A | N/A | 164 |
| Bureau of Land Management | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 150 | 0 | N/A | 0 | N/A | N/A | 150 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Beatys** | 31 | 0 | N/A | 0 | N/A | N/A | 31 |
| Bureau of Land Management | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Brothers/N Wagontire** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Bully Creek** | 74 | 26,689 | N/A | 0 | N/A | N/A | 26,763 |
| Bureau of Land Management | 16 | 23,018 | N/A | 0 | N/A | N/A | 23,034 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 58 | 3,671 | N/A | 0 | N/A | N/A | 3,729 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Burns** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Cow Lakes** | 64 | 7,455 | N/A | 3 | N/A | N/A | 7,521 |
| Bureau of Land Management | 5 | 5,855 | N/A | 1 | N/A | N/A | 5,861 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 59 | 1,591 | N/A | 2 | N/A | N/A | 1,652 |
| Other | 0 | 8 | N/A | 0 | N/A | N/A | 8 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **872** | **40,240** | **N/A** | **4** | **N/A** | **N/A** | **41,116** |
| **Cow Valley** | 204 | 3,198 | N/A | 0 | N/A | N/A | 3,403 |
| Bureau of Land Management | 19 | 453 | N/A | 0 | N/A | N/A | 472 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 185 | 2,745 | N/A | 0 | N/A | N/A | 2,930 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Crowley** | 93 | 0 | N/A | 0 | N/A | N/A | 93 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 93 | 0 | N/A | 0 | N/A | N/A | 93 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Drewsey** | 37 | 571 | N/A | 0 | N/A | N/A | 608 |
| Bureau of Land Management | 2 | 255 | N/A | 0 | N/A | N/A | 256 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 35 | 316 | N/A | 0 | N/A | N/A | 351 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Dry Valley/Jack Mountain** | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Bureau of Land Management | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Folly Farm/Saddle Butte** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Louse Canyon** | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **872** | **40,240** | **N/A** | **4** | **N/A** | **N/A** | **41,116** |
| **Paulina/12 Mile/Misery Flat** | 86 | 239 | N/A | 0 | N/A | N/A | 326 |
| Bureau of Land Management | 1 | 90 | N/A | 0 | N/A | N/A | 92 |
| Forest Service | 0 | 81 | N/A | 0 | N/A | N/A | 81 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 84 | 68 | N/A | 0 | N/A | N/A | 152 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Picture Rock** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblos/S Steens** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Soldier Creek** | 85 | 2,088 | N/A | 0 | N/A | N/A | 2,173 |
| Bureau of Land Management | 5 | 2,042 | N/A | 0 | N/A | N/A | 2,046 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 81 | 46 | N/A | 0 | N/A | N/A | 127 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Steens** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Trout Creeks** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **872** | **40,240** | **N/A** | **4** | **N/A** | **N/A** | **41,116** |
| **Tucker Hill** | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Bureau of Land Management | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Warners** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **207** | **67** | **N/A** | **0** | **N/A** | **N/A** | **274** |
| **Bald Hills** | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Box Elder** | 49 | 0 | N/A | 0 | N/A | N/A | 49 |
| Bureau of Land Management | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 42 | 0 | N/A | 0 | N/A | N/A | 42 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Carbon** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Emery** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hamlin Valley** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ibapah** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **207** | **67** | **N/A** | **0** | **N/A** | **N/A** | **274** |
| **Panguitch** | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 15 | 0 | N/A | 0 | N/A | N/A | 15 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Parker Mtn** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Raft River** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Rich County** | 77 | 0 | N/A | 0 | N/A | N/A | 77 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 71 | 0 | N/A | 0 | N/A | N/A | 71 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sheeprocks** | 21 | 67 | N/A | 0 | N/A | N/A | 88 |
| Bureau of Land Management | 5 | 30 | N/A | 0 | N/A | N/A | 34 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 3 | N/A | 0 | N/A | N/A | 3 |
| Private | 16 | 35 | N/A | 0 | N/A | N/A | 51 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Strawberry** | 26 | 0 | N/A | 0 | N/A | N/A | 26 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **207** | **67** | **N/A** | **0** | **N/A** | **N/A** | **274** |
| **Uintah-Diamond Mtn** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Bear River** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Blacks Fork** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo** | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo Connectivity** | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Continental Divide** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Daniel** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Douglas** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin East** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin West** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Fontenelle** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Grass Creek** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Greater South Pass** | 304 | 87 | N/A | 0 | N/A | N/A | 391 |
| Bureau of Land Management | 6 | 71 | N/A | 0 | N/A | N/A | 77 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 283 | 16 | N/A | 0 | N/A | N/A | 299 |
| Other | 6 | 0 | N/A | 0 | N/A | N/A | 6 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Hanna** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Heart Mountain** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hyattville** | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Jackson** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Little Mountain** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Natrona** | 180 | 5 | N/A | 0 | N/A | N/A | 185 |
| Bureau of Land Management | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 8 | 5 | N/A | 0 | N/A | N/A | 13 |
| Private | 164 | 0 | N/A | 0 | N/A | N/A | 164 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Newcastle** | 34 | 0 | N/A | 0 | N/A | N/A | 34 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 31 | 0 | N/A | 0 | N/A | N/A | 31 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillete Connectivity** | 68 | 54 | N/A | 0 | N/A | N/A | 123 |
| Bureau of Land Management | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Private | 39 | 54 | N/A | 0 | N/A | N/A | 93 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **North Gillette** | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Glenrock** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Laramie** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Oregon Basin** | 71 | 0 | N/A | 0 | N/A | N/A | 71 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 62 | 0 | N/A | 0 | N/A | N/A | 62 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Powder** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sage** | 22 | 0 | N/A | 0 | N/A | N/A | 22 |
| Bureau of Land Management | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 15 | 0 | N/A | 0 | N/A | N/A | 15 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Salt Wells** | 0 | 1,523 | N/A | 0 | N/A | N/A | 1,523 |
| Bureau of Land Management | 0 | 1,021 | N/A | 0 | N/A | N/A | 1,021 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 83 | N/A | 0 | N/A | N/A | 83 |
| Private | 0 | 419 | N/A | 0 | N/A | N/A | 419 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Seedskadee** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Shell** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **South Rawlins** | 98 | 0 | N/A | 0 | N/A | N/A | 98 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 98 | 0 | N/A | 0 | N/A | N/A | 98 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2014 - 2015<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,252** | **2,275** | **N/A** | **9** | **N/A** | **N/A** | **3,535** |
| **Thermopolis** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Thunder Basin** | 383 | 602 | N/A | 8 | N/A | N/A | 993 |
| Bureau of Land Management | 8 | 92 | N/A | 0 | N/A | N/A | 99 |
| Forest Service | 6 | 0 | N/A | 0 | N/A | N/A | 6 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 11 | 59 | N/A | 0 | N/A | N/A | 70 |
| Private | 357 | 451 | N/A | 8 | N/A | N/A | 816 |
| Other | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| **Uinta** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Washakie** | 14 | 3 | N/A | 0 | N/A | N/A | 17 |
| Bureau of Land Management | 2 | 3 | N/A | 0 | N/A | N/A | 5 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Private | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **GRAND TOTAL ALL STATES** | **41,809** | **141,917** | **N/A** | **19** | **N/A** | **N/A** | **183,745** |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **727** | **127** | **N/A** | **0** | **N/A** | **N/A** | **854** |
| **Meeker/White River** | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Middle Park** | 46 | 0 | N/A | 0 | N/A | N/A | 46 |
| Bureau of Land Management | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 26 | 0 | N/A | 0 | N/A | N/A | 26 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Eagle/South Routt** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Park** | 3 | 54 | N/A | 0 | N/A | N/A | 57 |
| Bureau of Land Management | 0 | 52 | N/A | 0 | N/A | N/A | 52 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 2 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Colorado** | 653 | 73 | N/A | 0 | N/A | N/A | 726 |
| Bureau of Land Management | 72 | 5 | N/A | 0 | N/A | N/A | 77 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Private | 571 | 68 | N/A | 0 | N/A | N/A | 639 |
| Other | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| **Parachute/Piceance/Roan** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **2,039** | **15,734** | **N/A** | **2** | **N/A** | **N/A** | **17,776** |
| **Idaho Desert Conservation Area - IHMA** | 100 | 0 | N/A | 0 | N/A | N/A | 100 |
| Bureau of Land Management | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 14 | 0 | N/A | 0 | N/A | N/A | 14 |
| Private | 65 | 0 | N/A | 0 | N/A | N/A | 65 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Desert Conservation Area - PHMA** | 58 | 13,899 | N/A | 0 | N/A | N/A | 13,957 |
| Bureau of Land Management | 11 | 13,353 | N/A | 0 | N/A | N/A | 13,363 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 8 | 538 | N/A | 0 | N/A | N/A | 546 |
| Private | 37 | 8 | N/A | 0 | N/A | N/A | 45 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 178 | 8 | N/A | 0 | N/A | N/A | 186 |
| Bureau of Land Management | 25 | 0 | N/A | 0 | N/A | N/A | 25 |
| Forest Service | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| Private | 137 | 8 | N/A | 0 | N/A | N/A | 145 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 1,298 | 1,705 | N/A | 2 | N/A | N/A | 3,005 |
| Bureau of Land Management | 97 | 1,075 | N/A | 2 | N/A | N/A | 1,175 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Private | 1,188 | 629 | N/A | 0 | N/A | N/A | 1,817 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho Southern Conservation Area - IHMA** | 302 | 65 | N/A | 0 | N/A | N/A | 367 |
| Bureau of Land Management | 38 | 8 | N/A | 0 | N/A | N/A | 46 |
| Forest Service | 32 | 12 | N/A | 0 | N/A | N/A | 44 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Private | 228 | 45 | N/A | 0 | N/A | N/A | 273 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **2,039** | **15,734** | **N/A** | **2** | **N/A** | **N/A** | **17,776** |
| **Idaho Southern Conservation Area - PHMA** | 33 | 2 | N/A | 0 | N/A | N/A | 35 |
| Bureau of Land Management | 4 | 2 | N/A | 0 | N/A | N/A | 6 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 28 | 0 | N/A | 0 | N/A | N/A | 28 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 23 | 55 | N/A | 0 | N/A | N/A | 79 |
| Bureau of Land Management | 20 | 55 | N/A | 0 | N/A | N/A | 75 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 47 | 0 | N/A | 0 | N/A | N/A | 47 |
| Bureau of Land Management | 28 | 0 | N/A | 0 | N/A | N/A | 28 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **30,134** | **0** | **N/A** | **0** | **N/A** | **N/A** | **30,134** |
| **Dakotas** | 1,315 | 0 | N/A | 0 | N/A | N/A | 1,315 |
| Bureau of Land Management | 17 | 0 | N/A | 0 | N/A | N/A | 17 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 52 | 0 | N/A | 0 | N/A | N/A | 52 |
| Private | 1,240 | 0 | N/A | 0 | N/A | N/A | 1,240 |
| Other | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| **Northern Montana** | 8,856 | 0 | N/A | 0 | N/A | N/A | 8,856 |
| Bureau of Land Management | 2,676 | 0 | N/A | 0 | N/A | N/A | 2,676 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 13 | 0 | N/A | 0 | N/A | N/A | 13 |
| State | 455 | 0 | N/A | 0 | N/A | N/A | 455 |
| Private | 5,709 | 0 | N/A | 0 | N/A | N/A | 5,709 |
| Other | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| **Powder River Basin** | 94 | 0 | N/A | 0 | N/A | N/A | 94 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 92 | 0 | N/A | 0 | N/A | N/A | 92 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **SW Montana Conservation Area** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Wyoming Basin** | 331 | 0 | N/A | 0 | N/A | N/A | 331 |
| Bureau of Land Management | 38 | 0 | N/A | 0 | N/A | N/A | 38 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| State | 11 | 0 | N/A | 0 | N/A | N/A | 11 |
| Private | 280 | 0 | N/A | 0 | N/A | N/A | 280 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Yellowstone Watershed** | 19,536 | 0 | N/A | 0 | N/A | N/A | 19,536 |
| Bureau of Land Management | 2,159 | 0 | N/A | 0 | N/A | N/A | 2,159 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 25 | 0 | N/A | 0 | N/A | N/A | 25 |
| State | 965 | 0 | N/A | 0 | N/A | N/A | 965 |
| Private | 16,386 | 0 | N/A | 0 | N/A | N/A | 16,386 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **565** | **11,417** | **N/A** | **1** | **N/A** | **N/A** | **11,984** |
| **Black Rock** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Butte/Buck/White Pine** | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Elko** | 11 | 1,414 | N/A | 0 | N/A | N/A | 1,424 |
| Bureau of Land Management | 1 | 74 | N/A | 0 | N/A | N/A | 74 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 10 | 1,340 | N/A | 0 | N/A | N/A | 1,349 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Central Great Basin** | 22 | 29 | N/A | 0 | N/A | N/A | 52 |
| Bureau of Land Management | 2 | 29 | N/A | 0 | N/A | N/A | 32 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 20 | 0 | N/A | 0 | N/A | N/A | 20 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **East High Desert** | 24 | 230 | N/A | 0 | N/A | N/A | 254 |
| Bureau of Land Management | 2 | 230 | N/A | 0 | N/A | N/A | 232 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 22 | 0 | N/A | 0 | N/A | N/A | 22 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lassen/South Washoe** | 81 | 5,063 | N/A | 0 | N/A | N/A | 5,143 |
| Bureau of Land Management | 0 | 4,638 | N/A | 0 | N/A | N/A | 4,638 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 80 | 425 | N/A | 0 | N/A | N/A | 505 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **565** | **11,417** | **N/A** | **1** | **N/A** | **N/A** | **11,984** |
| **Likely Tables PMU** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Lone Willow** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 7 | 0 | N/A | 0 | N/A | N/A | 7 |
| **Monitor** | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northeast Elko** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Northwest Great Basin (NV)** | 63 | 0 | N/A | 0 | N/A | N/A | 63 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 60 | 0 | N/A | 0 | N/A | N/A | 60 |
| **Northwest Interior** | 1 | 293 | N/A | 0 | N/A | N/A | 294 |
| Bureau of Land Management | 1 | 78 | N/A | 0 | N/A | N/A | 79 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 215 | N/A | 0 | N/A | N/A | 215 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **565** | **11,417** | **N/A** | **1** | **N/A** | **N/A** | **11,984** |
| **Owyhee** | 147 | 4,361 | N/A | 1 | N/A | N/A | 4,510 |
| Bureau of Land Management | 27 | 2,998 | N/A | 0 | N/A | N/A | 3,025 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 118 | 1,364 | N/A | 0 | N/A | N/A | 1,482 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblo Range** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ruby** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Smith/Reese** | 93 | 28 | N/A | 0 | N/A | N/A | 121 |
| Bureau of Land Management | 24 | 28 | N/A | 0 | N/A | N/A | 52 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 70 | 0 | N/A | 0 | N/A | N/A | 70 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Southeastern Nevada** | 78 | 0 | N/A | 0 | N/A | N/A | 78 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 78 | 0 | N/A | 0 | N/A | N/A | 78 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Western Pershing** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **1,052** | **14,627** | **N/A** | **0** | **N/A** | **N/A** | **15,679** |
| **Baker** | 131 | 230 | N/A | 0 | N/A | N/A | 361 |
| Bureau of Land Management | 27 | 203 | N/A | 0 | N/A | N/A | 230 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 103 | 27 | N/A | 0 | N/A | N/A | 131 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Beatys** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Brothers/N Wagontire** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Bully Creek** | 24 | 139 | N/A | 0 | N/A | N/A | 163 |
| Bureau of Land Management | 3 | 139 | N/A | 0 | N/A | N/A | 141 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 21 | 0 | N/A | 0 | N/A | N/A | 21 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Burns** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Cow Lakes** | 52 | 0 | N/A | 0 | N/A | N/A | 52 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 50 | 0 | N/A | 0 | N/A | N/A | 50 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,052** | **14,627** | **N/A** | **0** | **N/A** | **N/A** | **15,679** |
| **Cow Valley** | 154 | 0 | N/A | 0 | N/A | N/A | 154 |
| Bureau of Land Management | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 142 | 0 | N/A | 0 | N/A | N/A | 142 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Crowley** | 147 | 14,052 | N/A | 0 | N/A | N/A | 14,199 |
| Bureau of Land Management | 2 | 13,635 | N/A | 0 | N/A | N/A | 13,637 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 214 | N/A | 0 | N/A | N/A | 214 |
| Private | 145 | 203 | N/A | 0 | N/A | N/A | 348 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Drewsey** | 29 | 0 | N/A | 0 | N/A | N/A | 29 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 29 | 0 | N/A | 0 | N/A | N/A | 29 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Dry Valley/Jack Mountain** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Folly Farm/Saddle Butte** | 1 | 188 | N/A | 0 | N/A | N/A | 189 |
| Bureau of Land Management | 0 | 163 | N/A | 0 | N/A | N/A | 163 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 25 | N/A | 0 | N/A | N/A | 26 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Louse Canyon** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,052** | **14,627** | **N/A** | **0** | **N/A** | **N/A** | **15,679** |
| **Paulina/12 Mile/Misery Flat** | 433 | 0 | N/A | 0 | N/A | N/A | 433 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 431 | 0 | N/A | 0 | N/A | N/A | 431 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Picture Rock** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Pueblos/S Steens** | 0 | 18 | N/A | 0 | N/A | N/A | 18 |
| Bureau of Land Management | 0 | 15 | N/A | 0 | N/A | N/A | 15 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 3 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Soldier Creek** | 26 | 0 | N/A | 0 | N/A | N/A | 26 |
| Bureau of Land Management | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Steens** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Trout Creeks** | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 44 | 0 | N/A | 0 | N/A | N/A | 44 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **1,052** | **14,627** | **N/A** | **0** | **N/A** | **N/A** | **15,679** |
| **Tucker Hill** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Warners** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **436** | **7,632** | **N/A** | **2** | **N/A** | **N/A** | **8,070** |
| **Bald Hills** | 10 | 0 | N/A | 0 | N/A | N/A | 10 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 9 | 0 | N/A | 0 | N/A | N/A | 9 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Box Elder** | 243 | 6,149 | N/A | 2 | N/A | N/A | 6,394 |
| Bureau of Land Management | 2 | 37 | N/A | 0 | N/A | N/A | 39 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 241 | 6,112 | N/A | 2 | N/A | N/A | 6,355 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Carbon** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Emery** | 0 | 5 | N/A | 0 | N/A | N/A | 5 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 5 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hamlin Valley** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Ibapah** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **436** | **7,632** | **N/A** | **2** | **N/A** | **N/A** | **8,070** |
| **Panguitch** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Parker Mtn** | 15 | 1,418 | N/A | 0 | N/A | N/A | 1,433 |
| Bureau of Land Management | 0 | 299 | N/A | 0 | N/A | N/A | 299 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 510 | N/A | 0 | N/A | N/A | 510 |
| Private | 14 | 610 | N/A | 0 | N/A | N/A | 624 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Raft River** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Rich County** | 117 | 0 | N/A | 0 | N/A | N/A | 117 |
| Bureau of Land Management | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 114 | 0 | N/A | 0 | N/A | N/A | 114 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sheeprocks** | 45 | 59 | N/A | 0 | N/A | N/A | 104 |
| Bureau of Land Management | 4 | 30 | N/A | 0 | N/A | N/A | 34 |
| Forest Service | 2 | 29 | N/A | 0 | N/A | N/A | 31 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 39 | 0 | N/A | 0 | N/A | N/A | 39 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Strawberry** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **436** | **7,632** | **N/A** | **2** | **N/A** | **N/A** | **8,070** |
| **Uintah-Diamond Mtn** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Bear River** | 19 | 0 | N/A | 0 | N/A | N/A | 19 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 18 | 0 | N/A | 0 | N/A | N/A | 18 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Blacks Fork** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo** | 10 | 7 | N/A | 0 | N/A | N/A | 17 |
| Bureau of Land Management | 1 | 7 | N/A | 0 | N/A | N/A | 8 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Buffalo Connectivity** | 32 | 200 | N/A | 0 | N/A | N/A | 232 |
| Bureau of Land Management | 2 | 188 | N/A | 0 | N/A | N/A | 190 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 12 | N/A | 0 | N/A | N/A | 12 |
| Private | 30 | 0 | N/A | 0 | N/A | N/A | 30 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Continental Divide** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Daniel** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Douglas** | 125 | 628 | N/A | 0 | N/A | N/A | 753 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 124 | 628 | N/A | 0 | N/A | N/A | 753 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin East** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Elk Basin West** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Fontenelle** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Grass Creek** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Greater South Pass** | 172 | 146 | N/A | 0 | N/A | N/A | 318 |
| Bureau of Land Management | 5 | 99 | N/A | 0 | N/A | N/A | 104 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| State | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Private | 163 | 47 | N/A | 0 | N/A | N/A | 210 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Hanna** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Heart Mountain** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Hyattville** | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Jackson** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Little Mountain** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Natrona** | 139 | 181 | N/A | 0 | N/A | N/A | 319 |
| Bureau of Land Management | 4 | 4 | N/A | 0 | N/A | N/A | 8 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| State | 6 | 9 | N/A | 0 | N/A | N/A | 15 |
| Private | 124 | 167 | N/A | 0 | N/A | N/A | 291 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Newcastle** | 52 | 14 | N/A | 0 | N/A | N/A | 66 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Private | 45 | 14 | N/A | 0 | N/A | N/A | 60 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillete Connectivity** | 480 | 79 | N/A | 0 | N/A | N/A | 560 |
| Bureau of Land Management | 64 | 48 | N/A | 0 | N/A | N/A | 112 |
| Forest Service | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 16 | 0 | N/A | 0 | N/A | N/A | 16 |
| Private | 396 | 31 | N/A | 0 | N/A | N/A | 427 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Gillette** | 243 | 816 | N/A | 1 | N/A | N/A | 1,061 |
| Bureau of Land Management | 2 | 17 | N/A | 0 | N/A | N/A | 19 |
| Forest Service | 13 | 0 | N/A | 0 | N/A | N/A | 13 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 12 | 0 | N/A | 0 | N/A | N/A | 12 |
| Private | 216 | 799 | N/A | 1 | N/A | N/A | 1,017 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Glenrock** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **North Laramie** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Oregon Basin** | 16 | 173 | N/A | 0 | N/A | N/A | 190 |
| Bureau of Land Management | 0 | 143 | N/A | 0 | N/A | N/A | 143 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Private | 11 | 31 | N/A | 0 | N/A | N/A | 42 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Powder** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Sage** | 8 | 0 | N/A | 0 | N/A | N/A | 8 |
| Bureau of Land Management | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 5 | 0 | N/A | 0 | N/A | N/A | 5 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Salt Wells** | 4 | 0 | N/A | 0 | N/A | N/A | 4 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Seedskadee** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Shell** | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 2 | 0 | N/A | 0 | N/A | N/A | 2 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **South Rawlins** | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 3 | 0 | N/A | 0 | N/A | N/A | 3 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |

| State<br>BSU<br>Surface Management Agency | 2015 - 2016<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,838** | **4,261** | **N/A** | **23** | **N/A** | **N/A** | **6,122** |
| **Thermopolis** | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Thunder Basin** | 450 | 1,988 | N/A | 22 | N/A | N/A | 2,460 |
| Bureau of Land Management | 6 | 443 | N/A | 10 | N/A | N/A | 459 |
| Forest Service | 23 | 0 | N/A | 0 | N/A | N/A | 23 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 30 | 15 | N/A | 0 | N/A | N/A | 45 |
| Private | 390 | 1,531 | N/A | 12 | N/A | N/A | 1,932 |
| Other | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| **Uinta** | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Bureau of Land Management | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Private | 1 | 0 | N/A | 0 | N/A | N/A | 1 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **Washakie** | 50 | 27 | N/A | 0 | N/A | N/A | 78 |
| Bureau of Land Management | 1 | 27 | N/A | 0 | N/A | N/A | 28 |
| Forest Service | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| Other Federal | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| State | 22 | 0 | N/A | 0 | N/A | N/A | 22 |
| Private | 27 | 0 | N/A | 0 | N/A | N/A | 27 |
| Other | 0 | 0 | N/A | 0 | N/A | N/A | 0 |
| **GRAND TOTAL ALL STATES** | **36,961** | **54,035** | **N/A** | **29** | **N/A** | **N/A** | **91,025** |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **681** | **4,414** | **21,744** | **0** | **10** | **73** | **26,923** |
| **Meeker/White River** | 26 | 0 | 84 | 0 | 0 | 0 | 110 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 25 | 0 | 61 | 0 | 0 | 0 | 86 |
| Other | 0 | 0 | 22 | 0 | 0 | 0 | 22 |
| **Middle Park** | 26 | 0 | 2,315 | 0 | 0 | 0 | 2,341 |
| Bureau of Land Management | 0 | 0 | 851 | 0 | 0 | 0 | 851 |
| Forest Service | 0 | 0 | 33 | 0 | 0 | 0 | 33 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 138 | 0 | 0 | 0 | 138 |
| Private | 26 | 0 | 1,253 | 0 | 0 | 0 | 1,279 |
| Other | 0 | 0 | 40 | 0 | 0 | 0 | 40 |
| **North Eagle/South Routt** | 2 | 0 | 996 | 0 | 0 | 0 | 998 |
| Bureau of Land Management | 0 | 0 | 294 | 0 | 0 | 0 | 294 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 19 | 0 | 0 | 0 | 19 |
| Private | 2 | 0 | 681 | 0 | 0 | 0 | 682 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Park** | 1 | 0 | 3,646 | 0 | 0 | 0 | 3,647 |
| Bureau of Land Management | 0 | 0 | 1,549 | 0 | 0 | 0 | 1,549 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 169 | 0 | 0 | 0 | 169 |
| State | 0 | 0 | 353 | 0 | 0 | 0 | 353 |
| Private | 1 | 0 | 1,523 | 0 | 0 | 0 | 1,524 |
| Other | 0 | 0 | 52 | 0 | 0 | 0 | 52 |
| **Northwest Colorado** | 626 | 4,414 | 12,594 | 0 | 10 | 73 | 17,717 |
| Bureau of Land Management | 45 | 2,905 | 5,384 | 0 | 2 | 28 | 8,363 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 129 | 127 | 0 | 0 | 1 | 257 |
| State | 6 | 0 | 1,071 | 0 | 0 | 0 | 1,078 |
| Private | 574 | 1,380 | 5,828 | 0 | 9 | 45 | 7,836 |
| Other | 0 | 0 | 183 | 0 | 0 | 0 | 183 |
| **Parachute/Piceance/Roan** | 1 | 0 | 2,109 | 0 | 0 | 0 | 2,111 |
| Bureau of Land Management | 0 | 0 | 587 | 0 | 0 | 0 | 587 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 1 | 0 | 1,483 | 0 | 0 | 0 | 1,484 |
| Other | 0 | 0 | 39 | 0 | 0 | 0 | 39 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **1,686** | **47,579** | **30,569** | **26** | **11** | **127** | **79,999** |
| **Idaho Desert Conservation Area - IHMA** | 80 | 12,131 | 1,776 | 0 | 0 | 28 | 14,016 |
| Bureau of Land Management | 12 | 10,362 | 922 | 0 | 0 | 26 | 11,322 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 4 | 0 | 634 | 0 | 0 | 0 | 638 |
| State | 4 | 1,252 | 32 | 0 | 0 | 0 | 1,288 |
| Private | 59 | 517 | 188 | 0 | 0 | 2 | 766 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Desert Conservation Area - PHMA** | 112 | 23,954 | 3,030 | 24 | 0 | 51 | 27,171 |
| Bureau of Land Management | 50 | 21,085 | 2,552 | 1 | 0 | 39 | 23,727 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 13 | 0 | 44 | 0 | 0 | 0 | 57 |
| State | 3 | 68 | 79 | 0 | 0 | 1 | 149 |
| Private | 46 | 2,802 | 356 | 23 | 0 | 11 | 3,238 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 258 | 6,110 | 4,764 | 3 | 1 | 29 | 11,165 |
| Bureau of Land Management | 36 | 3,340 | 2,894 | 0 | 0 | 27 | 6,298 |
| Forest Service | 4 | 0 | 456 | 0 | 0 | 0 | 460 |
| Other Federal | 1 | 0 | 5 | 0 | 0 | 0 | 7 |
| State | 2 | 129 | 252 | 0 | 0 | 2 | 385 |
| Private | 214 | 2,641 | 1,155 | 3 | 0 | 1 | 4,013 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 888 | 145 | 8,731 | 0 | 4 | 1 | 9,770 |
| Bureau of Land Management | 147 | 44 | 4,957 | 0 | 1 | 0 | 5,149 |
| Forest Service | 6 | 0 | 617 | 0 | 0 | 0 | 623 |
| Other Federal | 0 | 0 | 193 | 0 | 0 | 0 | 194 |
| State | 7 | 0 | 707 | 0 | 0 | 0 | 714 |
| Private | 728 | 101 | 2,256 | 0 | 3 | 1 | 3,090 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Southern Conservation Area - IHMA** | 286 | 567 | 3,251 | 0 | 3 | 9 | 4,115 |
| Bureau of Land Management | 36 | 420 | 1,168 | 0 | 0 | 9 | 1,633 |
| Forest Service | 38 | 20 | 1,141 | 0 | 0 | 0 | 1,200 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 96 | 0 | 0 | 0 | 97 |
| Private | 210 | 127 | 845 | 0 | 2 | 0 | 1,185 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **1,686** | **47,579** | **30,569** | **26** | **11** | **127** | **79,999** |
| **Idaho Southern Conservation Area - PHMA** | 44 | 87 | 3,445 | 0 | 2 | 0 | 3,578 |
| Bureau of Land Management | 4 | 86 | 1,306 | 0 | 0 | 0 | 1,395 |
| Forest Service | 0 | 0 | 1,020 | 0 | 0 | 0 | 1,020 |
| Other Federal | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| State | 1 | 0 | 125 | 0 | 0 | 0 | 126 |
| Private | 40 | 0 | 994 | 0 | 2 | 0 | 1,036 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 4 | 0 | 1,388 | 0 | 0 | 0 | 1,393 |
| Bureau of Land Management | 1 | 0 | 1,059 | 0 | 0 | 0 | 1,060 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 87 | 0 | 0 | 0 | 87 |
| Private | 3 | 0 | 243 | 0 | 0 | 0 | 246 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 14 | 4,585 | 4,183 | 0 | 1 | 9 | 8,792 |
| Bureau of Land Management | 3 | 4,528 | 3,338 | 0 | 0 | 6 | 7,875 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 2 | 0 | 55 | 0 | 0 | 0 | 57 |
| State | 2 | 4 | 217 | 0 | 0 | 1 | 224 |
| Private | 7 | 54 | 573 | 0 | 1 | 1 | 636 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **31,326** | **49,975** | **36,988** | **22** | **241** | **345** | **118,897** |
| **Dakotas** | 3,311 | 428 | 8,372 | 0 | 25 | 6 | 12,142 |
| Bureau of Land Management | 35 | 270 | 972 | 0 | 0 | 4 | 1,281 |
| Forest Service | 2 | 0 | 677 | 0 | 0 | 0 | 679 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 86 | 11 | 709 | 0 | 1 | 0 | 807 |
| Private | 3,153 | 146 | 6,000 | 0 | 24 | 2 | 9,325 |
| Other | 36 | 0 | 14 | 0 | 0 | 0 | 49 |
| **Northern Montana** | 7,048 | 3,881 | 8,942 | 2 | 94 | 37 | 20,002 |
| Bureau of Land Management | 1,180 | 792 | 4,906 | 0 | 7 | 6 | 6,891 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 12 | 0 | 31 | 0 | 0 | 0 | 43 |
| State | 376 | 0 | 742 | 0 | 3 | 0 | 1,121 |
| Private | 5,479 | 3,089 | 3,264 | 1 | 84 | 31 | 11,947 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Powder River Basin** | 52 | 23,864 | 284 | 11 | 1 | 162 | 24,374 |
| Bureau of Land Management | 0 | 1,014 | 7 | 0 | 0 | 0 | 1,021 |
| Forest Service | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 1,894 | 28 | 2 | 0 | 20 | 1,945 |
| Private | 50 | 20,955 | 246 | 9 | 1 | 142 | 21,404 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SW Montana Conservation Area** | 0 | 0 | 5,037 | 0 | 0 | 0 | 5,037 |
| Bureau of Land Management | 0 | 0 | 1,691 | 0 | 0 | 0 | 1,691 |
| Forest Service | 0 | 0 | 398 | 0 | 0 | 0 | 398 |
| Other Federal | 0 | 0 | 136 | 0 | 0 | 0 | 136 |
| State | 0 | 0 | 705 | 0 | 0 | 0 | 705 |
| Private | 0 | 0 | 2,034 | 0 | 0 | 0 | 2,034 |
| Other | 0 | 0 | 73 | 0 | 0 | 0 | 73 |
| **Wyoming Basin** | 365 | 525 | 1,345 | 0 | 4 | 8 | 2,247 |
| Bureau of Land Management | 22 | 506 | 509 | 0 | 0 | 8 | 1,044 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 3 | 0 | 14 | 0 | 0 | 0 | 17 |
| State | 11 | 19 | 37 | 0 | 0 | 0 | 67 |
| Private | 329 | 0 | 786 | 0 | 3 | 0 | 1,118 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Yellowstone Watershed** | 20,550 | 21,278 | 13,009 | 9 | 117 | 132 | 55,096 |
| Bureau of Land Management | 1,832 | 1,046 | 2,529 | 6 | 8 | 1 | 5,423 |
| Forest Service | 2 | 0 | 14 | 0 | 0 | 0 | 16 |
| Other Federal | 42 | 0 | 196 | 0 | 0 | 0 | 238 |
| State | 1,256 | 1,609 | 960 | 0 | 5 | 16 | 3,847 |
| Private | 17,417 | 18,622 | 9,309 | 3 | 104 | 115 | 45,572 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **795** | **87,040** | **49,030** | **0** | **4** | **301** | **137,171** |
| **Black Rock** | 4 | 2,734 | 619 | 0 | 0 | 0 | 3,357 |
| Bureau of Land Management | 2 | 2,734 | 419 | 0 | 0 | 0 | 3,155 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 2 | 0 | 199 | 0 | 0 | 0 | 202 |
| **Butte/Buck/White Pine** | 22 | 0 | 4,428 | 0 | 0 | 0 | 4,450 |
| Bureau of Land Management | 2 | 0 | 4,193 | 0 | 0 | 0 | 4,195 |
| Forest Service | 0 | 0 | 93 | 0 | 0 | 0 | 93 |
| Other Federal | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 20 | 0 | 134 | 0 | 0 | 0 | 153 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Central Elko** | 1 | 11,078 | 9,090 | 0 | 0 | 21 | 20,190 |
| Bureau of Land Management | 0 | 9,351 | 4,607 | 0 | 0 | 8 | 13,967 |
| Forest Service | 0 | 27 | 1,601 | 0 | 0 | 0 | 1,628 |
| Other Federal | 0 | 0 | 29 | 0 | 0 | 0 | 29 |
| State | 0 | 39 | 1 | 0 | 0 | 0 | 40 |
| Private | 1 | 1,661 | 2,852 | 0 | 0 | 12 | 4,526 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Central Great Basin** | 14 | 5,804 | 4,874 | 0 | 0 | 28 | 10,721 |
| Bureau of Land Management | 10 | 5,731 | 4,223 | 0 | 0 | 24 | 9,988 |
| Forest Service | 0 | 0 | 79 | 0 | 0 | 0 | 79 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 3 | 74 | 572 | 0 | 0 | 4 | 653 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **East High Desert** | 44 | 38 | 1,920 | 0 | 0 | 1 | 2,003 |
| Bureau of Land Management | 3 | 38 | 1,310 | 0 | 0 | 1 | 1,351 |
| Forest Service | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| Other Federal | 0 | 0 | 18 | 0 | 0 | 0 | 18 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 42 | 0 | 550 | 0 | 0 | 0 | 592 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Lassen/South Washoe** | 395 | 18,113 | 3,414 | 0 | 0 | 69 | 21,992 |
| Bureau of Land Management | 3 | 17,040 | 1,944 | 0 | 0 | 59 | 19,046 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| State | 2 | 0 | 38 | 0 | 0 | 0 | 40 |
| Private | 0 | 165 | 74 | 0 | 0 | 0 | 239 |
| Other | 390 | 908 | 1,349 | 0 | 0 | 10 | 2,658 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **795** | **87,040** | **49,030** | **0** | **4** | **301** | **137,171** |
| **Likely Tables PMU** | 0 | 10 | 290 | 0 | 0 | 0 | 301 |
| Bureau of Land Management | 0 | 10 | 246 | 0 | 0 | 0 | 256 |
| Forest Service | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 32 | 0 | 0 | 0 | 32 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| **Lone Willow** | 2 | 244 | 545 | 0 | 0 | 0 | 792 |
| Bureau of Land Management | 2 | 244 | 491 | 0 | 0 | 0 | 737 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Other | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| **Monitor** | 5 | 0 | 2,893 | 0 | 0 | 0 | 2,898 |
| Bureau of Land Management | 0 | 0 | 2,132 | 0 | 0 | 0 | 2,132 |
| Forest Service | 0 | 0 | 535 | 0 | 0 | 0 | 535 |
| Other Federal | 0 | 0 | 21 | 0 | 0 | 0 | 21 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 5 | 0 | 205 | 0 | 0 | 0 | 210 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Northeast Elko** | 1 | 9,069 | 1,598 | 0 | 0 | 48 | 10,716 |
| Bureau of Land Management | 1 | 8,176 | 1,172 | 0 | 0 | 48 | 9,397 |
| Forest Service | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 892 | 425 | 0 | 0 | 0 | 1,317 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Northwest Great Basin (NV)** | 103 | 0 | 5,347 | 0 | 1 | 0 | 5,451 |
| Bureau of Land Management | 8 | 0 | 3,587 | 0 | 0 | 0 | 3,595 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 3 | 0 | 1,222 | 0 | 0 | 0 | 1,225 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 91 | 0 | 538 | 0 | 1 | 0 | 630 |
| **Northwest Interior** | 0 | 362 | 451 | 0 | 0 | 0 | 813 |
| Bureau of Land Management | 0 | 335 | 324 | 0 | 0 | 0 | 660 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 26 | 127 | 0 | 0 | 0 | 153 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **795** | **87,040** | **49,030** | **0** | **4** | **301** | **137,171** |
| **Owyhee** | 73 | 25,862 | 7,162 | 0 | 2 | 105 | 33,205 |
| Bureau of Land Management | 9 | 19,579 | 3,722 | 0 | 1 | 45 | 23,356 |
| Forest Service | 1 | 3,218 | 2,224 | 0 | 0 | 37 | 5,480 |
| Other Federal | 0 | 0 | 13 | 0 | 0 | 0 | 13 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 63 | 3,065 | 1,202 | 0 | 2 | 23 | 4,356 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pueblo Range** | 0 | 0 | 14 | 0 | 0 | 0 | 14 |
| Bureau of Land Management | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| **Ruby** | 1 | 5,748 | 3,511 | 0 | 0 | 16 | 9,275 |
| Bureau of Land Management | 0 | 1,903 | 2,195 | 0 | 0 | 1 | 4,099 |
| Forest Service | 0 | 0 | 389 | 0 | 0 | 0 | 389 |
| Other Federal | 0 | 0 | 67 | 0 | 0 | 0 | 67 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 3,845 | 860 | 0 | 0 | 14 | 4,719 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Smith/Reese** | 115 | 7,978 | 1,088 | 0 | 0 | 14 | 9,195 |
| Bureau of Land Management | 105 | 7,978 | 816 | 0 | 0 | 14 | 8,912 |
| Forest Service | 5 | 0 | 135 | 0 | 0 | 0 | 141 |
| Other Federal | 0 | 0 | 39 | 0 | 0 | 0 | 39 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 4 | 0 | 99 | 0 | 0 | 0 | 103 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Southeastern Nevada** | 15 | 0 | 1,784 | 0 | 0 | 0 | 1,799 |
| Bureau of Land Management | 2 | 0 | 1,598 | 0 | 0 | 0 | 1,600 |
| Forest Service | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| Other Federal | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 13 | 0 | 173 | 0 | 0 | 0 | 186 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Western Pershing** | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Bureau of Land Management | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **725** | **8,405** | **62,063** | **0** | **18** | **53** | **71,264** |
| **Baker** | 90 | 0 | 5,580 | 0 | 2 | 0 | 5,672 |
| Bureau of Land Management | 4 | 0 | 2,205 | 0 | 0 | 0 | 2,208 |
| Forest Service | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Private | 86 | 0 | 3,369 | 0 | 2 | 0 | 3,458 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Beatys** | 51 | 287 | 7,192 | 0 | 1 | 0 | 7,531 |
| Bureau of Land Management | 26 | 0 | 4,875 | 0 | 0 | 0 | 4,901 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 1 | 287 | 1,601 | 0 | 0 | 0 | 1,889 |
| State | 6 | 0 | 117 | 0 | 0 | 0 | 122 |
| Private | 18 | 0 | 599 | 0 | 1 | 0 | 618 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Brothers/N Wagontire** | 13 | 0 | 5,135 | 0 | 0 | 0 | 5,148 |
| Bureau of Land Management | 12 | 0 | 3,410 | 0 | 0 | 0 | 3,422 |
| Forest Service | 0 | 0 | 246 | 0 | 0 | 0 | 247 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 333 | 0 | 0 | 0 | 333 |
| Private | 1 | 0 | 1,145 | 0 | 0 | 0 | 1,146 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Bully Creek** | 26 | 0 | 2,538 | 0 | 1 | 0 | 2,565 |
| Bureau of Land Management | 2 | 0 | 1,825 | 0 | 0 | 0 | 1,827 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Private | 23 | 0 | 711 | 0 | 1 | 0 | 735 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Burns** | 0 | 0 | 375 | 0 | 0 | 0 | 375 |
| Bureau of Land Management | 0 | 0 | 179 | 0 | 0 | 0 | 179 |
| Forest Service | 0 | 0 | 46 | 0 | 0 | 0 | 46 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 150 | 0 | 0 | 0 | 150 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cow Lakes** | 36 | 1,312 | 3,191 | 0 | 1 | 0 | 4,540 |
| Bureau of Land Management | 1 | 1,312 | 2,272 | 0 | 0 | 0 | 3,585 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Private | 35 | 0 | 906 | 0 | 1 | 0 | 943 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **725** | **8,405** | **62,063** | **0** | **18** | **53** | **71,264** |
| **Cow Valley** | 165 | 0 | 5,218 | 0 | 7 | 0 | 5,390 |
| Bureau of Land Management | 7 | 0 | 1,129 | 0 | 0 | 0 | 1,136 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 65 | 0 | 0 | 0 | 65 |
| Private | 158 | 0 | 4,023 | 0 | 7 | 0 | 4,189 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Crowley** | 228 | 841 | 4,318 | 0 | 4 | 9 | 5,400 |
| Bureau of Land Management | 1 | 302 | 3,376 | 0 | 0 | 0 | 3,678 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 532 | 225 | 0 | 0 | 8 | 765 |
| Private | 227 | 7 | 718 | 0 | 4 | 1 | 956 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Drewsey** | 50 | 0 | 3,471 | 0 | 1 | 0 | 3,522 |
| Bureau of Land Management | 6 | 0 | 1,774 | 0 | 0 | 0 | 1,780 |
| Forest Service | 0 | 0 | 91 | 0 | 0 | 0 | 91 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 13 | 0 | 0 | 0 | 13 |
| Private | 44 | 0 | 1,593 | 0 | 1 | 0 | 1,638 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Dry Valley/Jack Mountain** | 3 | 0 | 3,915 | 0 | 0 | 0 | 3,919 |
| Bureau of Land Management | 3 | 0 | 3,748 | 0 | 0 | 0 | 3,751 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 22 | 0 | 0 | 0 | 22 |
| Private | 0 | 0 | 146 | 0 | 0 | 0 | 146 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Folly Farm/Saddle Butte** | 2 | 1,454 | 680 | 0 | 0 | 5 | 2,140 |
| Bureau of Land Management | 0 | 1,454 | 473 | 0 | 0 | 5 | 1,932 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 78 | 0 | 0 | 0 | 78 |
| Private | 2 | 0 | 128 | 0 | 0 | 0 | 130 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Louse Canyon** | 1 | 1,482 | 4,683 | 0 | 0 | 0 | 6,167 |
| Bureau of Land Management | 0 | 1,446 | 4,244 | 0 | 0 | 0 | 5,690 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 261 | 0 | 0 | 0 | 261 |
| State | 0 | 0 | 34 | 0 | 0 | 0 | 34 |
| Private | 1 | 36 | 144 | 0 | 0 | 0 | 182 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **725** | **8,405** | **62,063** | **0** | **18** | **53** | **71,264** |
| **Paulina/12 Mile/Misery Flat** | 23 | 970 | 4,218 | 0 | 0 | 40 | 5,251 |
| Bureau of Land Management | 8 | 854 | 1,381 | 0 | 0 | 29 | 2,273 |
| Forest Service | 0 | 0 | 94 | 0 | 0 | 0 | 94 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 154 | 0 | 0 | 0 | 155 |
| Private | 14 | 117 | 2,588 | 0 | 0 | 10 | 2,729 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Picture Rock** | 1 | 2,058 | 234 | 0 | 0 | 0 | 2,293 |
| Bureau of Land Management | 1 | 2,052 | 197 | 0 | 0 | 0 | 2,250 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 6 | 34 | 0 | 0 | 0 | 41 |
| Other | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| **Pueblos/S Steens** | 0 | 0 | 1,422 | 0 | 0 | 0 | 1,423 |
| Bureau of Land Management | 0 | 0 | 1,009 | 0 | 0 | 0 | 1,009 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 413 | 0 | 0 | 0 | 413 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Soldier Creek** | 17 | 0 | 3,062 | 0 | 0 | 0 | 3,079 |
| Bureau of Land Management | 12 | 0 | 2,385 | 0 | 0 | 0 | 2,397 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| State | 0 | 0 | 355 | 0 | 0 | 0 | 355 |
| Private | 5 | 0 | 318 | 0 | 0 | 0 | 323 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Steens** | 1 | 0 | 1,202 | 0 | 0 | 0 | 1,203 |
| Bureau of Land Management | 0 | 0 | 906 | 0 | 0 | 0 | 906 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 28 | 0 | 0 | 0 | 28 |
| State | 0 | 0 | 21 | 0 | 0 | 0 | 21 |
| Private | 1 | 0 | 247 | 0 | 0 | 0 | 248 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Trout Creeks** | 2 | 0 | 1,941 | 0 | 0 | 0 | 1,943 |
| Bureau of Land Management | 0 | 0 | 1,618 | 0 | 0 | 0 | 1,619 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 1 | 0 | 323 | 0 | 0 | 0 | 324 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **725** | **8,405** | **62,063** | **0** | **18** | **53** | **71,264** |
| **Tucker Hill** | 11 | 0 | 232 | 0 | 0 | 0 | 244 |
| Bureau of Land Management | 2 | 0 | 93 | 0 | 0 | 0 | 95 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 9 | 0 | 140 | 0 | 0 | 0 | 149 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Warners** | 4 | 0 | 3,456 | 0 | 0 | 0 | 3,460 |
| Bureau of Land Management | 4 | 0 | 2,512 | 0 | 0 | 0 | 2,516 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 68 | 0 | 0 | 0 | 68 |
| Private | 0 | 0 | 874 | 0 | 0 | 0 | 875 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **421** | **11,933** | **30,513** | **0** | **1** | **70** | **42,937** |
| **Bald Hills** | 12 | 0 | 1,688 | 0 | 0 | 0 | 1,700 |
| Bureau of Land Management | 0 | 0 | 1,422 | 0 | 0 | 0 | 1,422 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 114 | 0 | 0 | 0 | 114 |
| Private | 12 | 0 | 152 | 0 | 0 | 0 | 164 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Box Elder** | 147 | 9,364 | 2,793 | 0 | 1 | 44 | 12,349 |
| Bureau of Land Management | 0 | 6,065 | 1,059 | 0 | 0 | 38 | 7,162 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 1,089 | 121 | 0 | 0 | 0 | 1,210 |
| Private | 147 | 2,210 | 1,613 | 0 | 1 | 6 | 3,976 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Carbon** | 0 | 0 | 3,305 | 0 | 0 | 0 | 3,305 |
| Bureau of Land Management | 0 | 0 | 353 | 0 | 0 | 0 | 353 |
| Forest Service | 0 | 0 | 56 | 0 | 0 | 0 | 56 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 565 | 0 | 0 | 0 | 565 |
| Private | 0 | 0 | 2,331 | 0 | 0 | 0 | 2,331 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Emery** | 0 | 0 | 512 | 0 | 0 | 0 | 512 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 497 | 0 | 0 | 0 | 497 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hamlin Valley** | 2 | 0 | 767 | 0 | 0 | 0 | 768 |
| Bureau of Land Management | 0 | 0 | 519 | 0 | 0 | 0 | 519 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 53 | 0 | 0 | 0 | 53 |
| Private | 2 | 0 | 194 | 0 | 0 | 0 | 196 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Ibapah** | 0 | 2 | 254 | 0 | 0 | 0 | 256 |
| Bureau of Land Management | 0 | 0 | 124 | 0 | 0 | 0 | 124 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 2 | 95 | 0 | 0 | 0 | 97 |
| State | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Private | 0 | 0 | 23 | 0 | 0 | 0 | 23 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **421** | **11,933** | **30,513** | **0** | **1** | **70** | **42,937** |
| **Panguitch** | 1 | 1,601 | 2,020 | 0 | 0 | 25 | 3,647 |
| Bureau of Land Management | 0 | 0 | 864 | 0 | 0 | 0 | 864 |
| Forest Service | 0 | 1,518 | 168 | 0 | 0 | 24 | 1,710 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 173 | 0 | 0 | 0 | 173 |
| Private | 1 | 83 | 816 | 0 | 0 | 0 | 900 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Parker Mtn** | 1 | 0 | 3,767 | 0 | 0 | 0 | 3,768 |
| Bureau of Land Management | 0 | 0 | 1,215 | 0 | 0 | 0 | 1,215 |
| Forest Service | 0 | 0 | 1,280 | 0 | 0 | 0 | 1,280 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 994 | 0 | 0 | 0 | 994 |
| Private | 1 | 0 | 278 | 0 | 0 | 0 | 279 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Raft River** | 0 | 0 | 586 | 0 | 0 | 0 | 586 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 541 | 0 | 0 | 0 | 541 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 46 | 0 | 0 | 0 | 46 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rich County** | 47 | 0 | 5,577 | 0 | 0 | 0 | 5,624 |
| Bureau of Land Management | 1 | 0 | 773 | 0 | 0 | 0 | 774 |
| Forest Service | 0 | 0 | 74 | 0 | 0 | 0 | 74 |
| Other Federal | 0 | 0 | 40 | 0 | 0 | 0 | 40 |
| State | 2 | 0 | 436 | 0 | 0 | 0 | 437 |
| Private | 45 | 0 | 4,253 | 0 | 0 | 0 | 4,298 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Sheeprocks** | 172 | 872 | 3,518 | 0 | 0 | 1 | 4,563 |
| Bureau of Land Management | 6 | 468 | 1,807 | 0 | 0 | 0 | 2,282 |
| Forest Service | 4 | 0 | 898 | 0 | 0 | 0 | 903 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 402 | 189 | 0 | 0 | 1 | 592 |
| Private | 161 | 1 | 623 | 0 | 0 | 0 | 785 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Strawberry** | 6 | 0 | 2,278 | 0 | 0 | 0 | 2,284 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 748 | 0 | 0 | 0 | 748 |
| Other Federal | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| State | 3 | 0 | 593 | 0 | 0 | 0 | 596 |
| Private | 2 | 0 | 929 | 0 | 0 | 0 | 932 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **421** | **11,933** | **30,513** | **0** | **1** | **70** | **42,937** |
| **Uintah-Diamond Mtn** | 32 | 94 | 3,449 | 0 | 0 | 0 | 3,576 |
| Bureau of Land Management | 0 | 1 | 1,484 | 0 | 0 | 0 | 1,486 |
| Forest Service | 0 | 0 | 374 | 0 | 0 | 0 | 374 |
| Other Federal | 0 | 0 | 169 | 0 | 0 | 0 | 169 |
| State | 5 | 85 | 310 | 0 | 0 | 0 | 400 |
| Private | 27 | 8 | 1,112 | 0 | 0 | 0 | 1,147 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Bear River** | 9 | 0 | 73 | 0 | 0 | 0 | 83 |
| Bureau of Land Management | 0 | 0 | 39 | 0 | 0 | 0 | 39 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| State | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| Private | 9 | 0 | 25 | 0 | 0 | 0 | 35 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Blacks Fork** | 1 | 0 | 1,104 | 0 | 0 | 0 | 1,105 |
| Bureau of Land Management | 0 | 0 | 387 | 0 | 0 | 0 | 387 |
| Forest Service | 0 | 0 | 226 | 0 | 0 | 0 | 226 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 33 | 0 | 0 | 0 | 33 |
| Private | 1 | 0 | 458 | 0 | 0 | 0 | 459 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Buffalo** | 10 | 238 | 2,130 | 0 | 0 | 1 | 2,379 |
| Bureau of Land Management | 1 | 0 | 158 | 0 | 0 | 0 | 159 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 159 | 0 | 0 | 0 | 159 |
| Private | 9 | 238 | 1,813 | 0 | 0 | 1 | 2,061 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Buffalo Connectivity** | 29 | 31,483 | 830 | 2 | 0 | 25 | 32,369 |
| Bureau of Land Management | 2 | 4,546 | 23 | 0 | 0 | 0 | 4,571 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 1,840 | 47 | 0 | 0 | 0 | 1,887 |
| Private | 26 | 25,097 | 761 | 2 | 0 | 25 | 25,911 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Continental Divide** | 0 | 0 | 721 | 0 | 0 | 0 | 721 |
| Bureau of Land Management | 0 | 0 | 383 | 0 | 0 | 0 | 383 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Private | 0 | 0 | 335 | 0 | 0 | 0 | 335 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Daniel** | 2 | 0 | 3,167 | 0 | 0 | 0 | 3,168 |
| Bureau of Land Management | 0 | 0 | 1,375 | 0 | 0 | 0 | 1,375 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 206 | 0 | 0 | 0 | 206 |
| Private | 2 | 0 | 1,581 | 0 | 0 | 0 | 1,583 |
| Other | 0 | 0 | 4 | 0 | 0 | 0 | 4 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Douglas** | 60 | 0 | 336 | 0 | 1 | 0 | 396 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 29 | 0 | 0 | 0 | 30 |
| Private | 59 | 0 | 307 | 0 | 0 | 0 | 366 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Elk Basin East** | 0 | 0 | 118 | 0 | 0 | 0 | 118 |
| Bureau of Land Management | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 16 | 0 | 0 | 0 | 16 |
| State | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Private | 0 | 0 | 79 | 0 | 0 | 0 | 79 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Elk Basin West** | 0 | 0 | 125 | 0 | 0 | 0 | 125 |
| Bureau of Land Management | 0 | 0 | 17 | 0 | 0 | 0 | 17 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Private | 0 | 0 | 103 | 0 | 0 | 0 | 103 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fontenelle** | 20 | 0 | 1,929 | 0 | 0 | 0 | 1,949 |
| Bureau of Land Management | 12 | 0 | 1,476 | 0 | 0 | 0 | 1,488 |
| Forest Service | 0 | 0 | 50 | 0 | 0 | 0 | 50 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 0 | 88 | 0 | 0 | 0 | 91 |
| Private | 6 | 0 | 314 | 0 | 0 | 0 | 320 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grass Creek** | 3 | 0 | 534 | 0 | 0 | 0 | 538 |
| Bureau of Land Management | 2 | 0 | 207 | 0 | 0 | 0 | 208 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 39 | 0 | 0 | 0 | 39 |
| Private | 2 | 0 | 289 | 0 | 0 | 0 | 291 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Greater South Pass** | 46 | 263 | 21,131 | 0 | 1 | 0 | 21,441 |
| Bureau of Land Management | 4 | 205 | 15,212 | 0 | 0 | 0 | 15,421 |
| Forest Service | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| Other Federal | 4 | 0 | 358 | 0 | 0 | 0 | 362 |
| State | 1 | 3 | 1,436 | 0 | 0 | 0 | 1,441 |
| Private | 37 | 55 | 4,097 | 0 | 1 | 0 | 4,189 |
| Other | 0 | 0 | 14 | 0 | 0 | 0 | 14 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Hanna** | 0 | 0 | 4,931 | 0 | 0 | 0 | 4,931 |
| Bureau of Land Management | 0 | 0 | 1,899 | 0 | 0 | 0 | 1,899 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 52 | 0 | 0 | 0 | 52 |
| State | 0 | 0 | 361 | 0 | 0 | 0 | 361 |
| Private | 0 | 0 | 2,606 | 0 | 0 | 0 | 2,606 |
| Other | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| **Heart Mountain** | 0 | 0 | 366 | 0 | 0 | 0 | 367 |
| Bureau of Land Management | 0 | 0 | 125 | 0 | 0 | 0 | 125 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 13 | 0 | 0 | 0 | 13 |
| State | 0 | 0 | 39 | 0 | 0 | 0 | 39 |
| Private | 0 | 0 | 189 | 0 | 0 | 0 | 189 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hyattville** | 12 | 64 | 945 | 0 | 0 | 0 | 1,022 |
| Bureau of Land Management | 1 | 62 | 739 | 0 | 0 | 0 | 802 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 111 | 0 | 0 | 0 | 111 |
| Private | 11 | 2 | 96 | 0 | 0 | 0 | 109 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Jackson** | 0 | 0 | 465 | 0 | 0 | 0 | 465 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 424 | 0 | 0 | 0 | 424 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 41 | 0 | 0 | 0 | 41 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Little Mountain** | 2 | 0 | 309 | 0 | 0 | 0 | 311 |
| Bureau of Land Management | 0 | 0 | 223 | 0 | 0 | 0 | 223 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| Private | 2 | 0 | 77 | 0 | 0 | 0 | 78 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Natrona** | 75 | 578 | 11,505 | 1 | 2 | 4 | 12,165 |
| Bureau of Land Management | 4 | 106 | 5,125 | 0 | 0 | 0 | 5,235 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 2 | 0 | 75 | 0 | 0 | 0 | 77 |
| State | 4 | 195 | 1,552 | 0 | 0 | 0 | 1,752 |
| Private | 64 | 277 | 4,750 | 1 | 2 | 4 | 5,098 |
| Other | 1 | 0 | 2 | 0 | 0 | 0 | 3 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Newcastle** | 38 | 0 | 1,058 | 0 | 0 | 0 | 1,096 |
| Bureau of Land Management | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Forest Service | 1 | 0 | 603 | 0 | 0 | 0 | 604 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 5 | 0 | 70 | 0 | 0 | 0 | 76 |
| Private | 31 | 0 | 382 | 0 | 0 | 0 | 414 |
| Other | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| **North Gillete Connectivity** | 286 | 0 | 389 | 0 | 2 | 0 | 677 |
| Bureau of Land Management | 34 | 0 | 31 | 0 | 0 | 0 | 66 |
| Forest Service | 2 | 0 | 84 | 0 | 0 | 0 | 86 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 18 | 0 | 32 | 0 | 0 | 0 | 49 |
| Private | 232 | 0 | 242 | 0 | 2 | 0 | 475 |
| Other | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **North Gillette** | 139 | 0 | 944 | 0 | 1 | 0 | 1,084 |
| Bureau of Land Management | 2 | 0 | 15 | 0 | 0 | 0 | 17 |
| Forest Service | 5 | 0 | 594 | 0 | 0 | 0 | 599 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 0 | 18 | 0 | 0 | 0 | 21 |
| Private | 129 | 0 | 317 | 0 | 1 | 0 | 447 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Glenrock** | 0 | 266 | 548 | 0 | 0 | 1 | 816 |
| Bureau of Land Management | 0 | 47 | 138 | 0 | 0 | 0 | 185 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 35 | 78 | 0 | 0 | 0 | 113 |
| Private | 0 | 183 | 332 | 0 | 0 | 1 | 518 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Laramie** | 0 | 0 | 501 | 0 | 0 | 0 | 501 |
| Bureau of Land Management | 0 | 0 | 40 | 0 | 0 | 0 | 40 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 73 | 0 | 0 | 0 | 73 |
| Private | 0 | 0 | 382 | 0 | 0 | 0 | 383 |
| Other | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| **Oregon Basin** | 23 | 63 | 2,229 | 0 | 0 | 0 | 2,316 |
| Bureau of Land Management | 7 | 29 | 1,208 | 0 | 0 | 0 | 1,244 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 6 | 151 | 0 | 0 | 0 | 159 |
| Private | 14 | 28 | 870 | 0 | 0 | 0 | 913 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Powder** | 0 | 0 | 28 | 0 | 0 | 0 | 28 |
| Bureau of Land Management | 0 | 0 | 24 | 0 | 0 | 0 | 24 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Sage** | 6 | 0 | 3,744 | 0 | 0 | 0 | 3,750 |
| Bureau of Land Management | 1 | 0 | 2,145 | 0 | 0 | 0 | 2,146 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 40 | 0 | 0 | 0 | 40 |
| State | 0 | 0 | 318 | 0 | 0 | 0 | 319 |
| Private | 5 | 0 | 1,232 | 0 | 0 | 0 | 1,237 |
| Other | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| **Salt Wells** | 5 | 0 | 1,406 | 0 | 0 | 0 | 1,411 |
| Bureau of Land Management | 3 | 0 | 1,071 | 0 | 0 | 0 | 1,074 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 61 | 0 | 0 | 0 | 62 |
| Private | 2 | 0 | 274 | 0 | 0 | 0 | 276 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Seedskadee** | 0 | 0 | 115 | 0 | 0 | 0 | 115 |
| Bureau of Land Management | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 24 | 0 | 0 | 0 | 24 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 48 | 0 | 0 | 0 | 48 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Shell** | 2 | 0 | 66 | 0 | 0 | 0 | 67 |
| Bureau of Land Management | 0 | 0 | 24 | 0 | 0 | 0 | 24 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Private | 1 | 0 | 38 | 0 | 0 | 0 | 40 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **South Rawlins** | 50 | 0 | 4,888 | 0 | 0 | 0 | 4,939 |
| Bureau of Land Management | 1 | 0 | 1,980 | 0 | 0 | 0 | 1,981 |
| Forest Service | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Other Federal | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| State | 1 | 0 | 481 | 0 | 0 | 0 | 481 |
| Private | 49 | 0 | 2,351 | 0 | 0 | 0 | 2,401 |
| Other | 0 | 0 | 68 | 0 | 0 | 0 | 68 |

| State<br>BSU<br>Surface Management Agency | 2016 - 2017<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **1,350** | **34,557** | **77,135** | **3** | **11** | **31** | **113,087** |
| **Thermopolis** | 0 | 0 | 56 | 0 | 0 | 0 | 56 |
| Bureau of Land Management | 0 | 0 | 14 | 0 | 0 | 0 | 14 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 41 | 0 | 0 | 0 | 41 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Thunder Basin** | 510 | 128 | 6,640 | 0 | 4 | 0 | 7,282 |
| Bureau of Land Management | 8 | 0 | 135 | 0 | 0 | 0 | 144 |
| Forest Service | 6 | 0 | 3,700 | 0 | 0 | 0 | 3,705 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 15 | 0 | 302 | 0 | 0 | 0 | 317 |
| Private | 480 | 128 | 2,502 | 0 | 3 | 0 | 3,113 |
| Other | 2 | 0 | 1 | 0 | 0 | 0 | 3 |
| **Uinta** | 0 | 0 | 1,267 | 0 | 0 | 0 | 1,267 |
| Bureau of Land Management | 0 | 0 | 948 | 0 | 0 | 0 | 948 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 38 | 0 | 0 | 0 | 38 |
| Private | 0 | 0 | 278 | 0 | 0 | 0 | 278 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Washakie** | 23 | 1,474 | 2,532 | 0 | 0 | 0 | 4,030 |
| Bureau of Land Management | 1 | 1,348 | 1,478 | 0 | 0 | 0 | 2,828 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 126 | 240 | 0 | 0 | 0 | 368 |
| Private | 20 | 0 | 814 | 0 | 0 | 0 | 835 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **GRAND TOTAL ALL STATES** | **37,128** | **245,919** | **311,552** | **52** | **299** | **1,034** | **595,984** |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **180** | **17,846** | **NA** | **23** | **NA** | **NA** | **18,049** |
| **Meeker/White River** | 4 | 0 | NA | 0 | NA | NA | 4 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 4 | 0 | NA | 0 | NA | NA | 4 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Middle Park** | 16 | 316 | NA | 0 | NA | NA | 332 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 316 | NA | 0 | NA | NA | 317 |
| Private | 12 | 0 | NA | 0 | NA | NA | 12 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Eagle/South Routt** | 7 | 364 | NA | 0 | NA | NA | 371 |
| Bureau of Land Management | 0 | 363 | NA | 0 | NA | NA | 363 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 7 | 0 | NA | 0 | NA | NA | 7 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Park** | 44 | 0 | NA | 0 | NA | NA | 44 |
| Bureau of Land Management | 4 | 0 | NA | 0 | NA | NA | 4 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 13 | 0 | NA | 0 | NA | NA | 13 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 25 | 0 | NA | 0 | NA | NA | 25 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Northwest Colorado** | 107 | 17,162 | NA | 23 | NA | NA | 17,292 |
| Bureau of Land Management | 2 | 4,836 | NA | 0 | NA | NA | 4,838 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 2 | 909 | NA | 0 | NA | NA | 911 |
| Private | 103 | 11,386 | NA | 23 | NA | NA | 11,512 |
| Other | 0 | 31 | NA | 0 | NA | NA | 31 |
| **Parachute/Piceance/Roan** | 2 | 4 | NA | 0 | NA | NA | 6 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 4 | NA | 0 | NA | NA | 5 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **1,269** | **195,813** | **NA** | **6** | **NA** | **NA** | **197,088** |
| **Idaho Desert Conservation Area - IHMA** | 309 | 9,538 | NA | 0 | NA | NA | 9,847 |
| Bureau of Land Management | 43 | 9,157 | NA | 0 | NA | NA | 9,200 |
| Forest Service | 0 | 0 | 0 | 0 | NA | NA | 0 |
| Other Federal | 7 | 0 | NA | 0 | NA | NA | 7 |
| State | 23 | 242 | NA | 0 | NA | NA | 265 |
| Private | 236 | 139 | NA | 0 | NA | NA | 375 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho Desert Conservation Area - PHMA** | 48 | 10,609 | NA | 0 | NA | NA | 10,657 |
| Bureau of Land Management | 31 | 10,577 | NA | 0 | NA | NA | 10,608 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 5 | 0 | NA | 0 | NA | NA | 5 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 13 | 32 | NA | 0 | NA | NA | 45 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 149 | 28,273 | NA | 4 | NA | NA | 28,426 |
| Bureau of Land Management | 32 | 11,274 | NA | 2 | NA | NA | 11,308 |
| Forest Service | 17 | 8 | NA | 0 | NA | NA | 25 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 2 | 5,470 | NA | 0 | NA | NA | 5,472 |
| Private | 98 | 11,522 | NA | 2 | NA | NA | 11,622 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 344 | 73,392 | NA | 2 | NA | NA | 73,738 |
| Bureau of Land Management | 146 | 24,113 | NA | 0 | NA | NA | 24,259 |
| Forest Service | 9 | 0 | NA | 0 | NA | NA | 9 |
| Other Federal | 10 | 71 | NA | 0 | NA | NA | 81 |
| State | 14 | 24,782 | NA | 0 | NA | NA | 24,796 |
| Private | 166 | 24,425 | NA | 2 | NA | NA | 24,593 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho Southern Conservation Area - IHMA** | 166 | 30,992 | NA | 0 | NA | NA | 31,158 |
| Bureau of Land Management | 26 | 27,902 | NA | 0 | NA | NA | 27,928 |
| Forest Service | 5 | 131 | NA | 0 | NA | NA | 136 |
| Other Federal | 0 | 4 | NA | 0 | NA | NA | 4 |
| State | 7 | 1,847 | NA | 0 | NA | NA | 1,854 |
| Private | 128 | 1,108 | NA | 0 | NA | NA | 1,236 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **1,269** | **195,813** | **NA** | **6** | **NA** | **NA** | **197,088** |
| **Idaho Southern Conservation Area - PHMA** | 107 | 9,283 | NA | 0 | NA | NA | 9,390 |
| Bureau of Land Management | 37 | 8,286 | NA | 0 | NA | NA | 8,323 |
| Forest Service | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 673 | NA | 0 | NA | NA | 674 |
| Private | 67 | 324 | NA | 0 | NA | NA | 391 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 29 | 35 | NA | 0 | NA | NA | 64 |
| Bureau of Land Management | 20 | 35 | NA | 0 | NA | NA | 55 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 8 | 0 | NA | 0 | NA | NA | 8 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 117 | 33,691 | NA | 0 | NA | NA | 33,808 |
| Bureau of Land Management | 32 | 30,390 | NA | 0 | NA | NA | 30,422 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 3 | 371 | NA | 0 | NA | NA | 374 |
| State | 2 | 1,926 | NA | 0 | NA | NA | 1,928 |
| Private | 80 | 1,003 | NA | 0 | NA | NA | 1,083 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **9,661** | **1,540** | **NA** | **1** | **NA** | **NA** | **11,202** |
| **Dakotas** | 868 | 0 | NA | 0 | NA | NA | 868 |
| Bureau of Land Management | 31 | 0 | NA | 0 | NA | NA | 31 |
| Forest Service | 16 | 0 | NA | 0 | NA | NA | 16 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 23 | 0 | NA | 0 | NA | NA | 23 |
| Private | 787 | 0 | NA | 0 | NA | NA | 787 |
| Other | 11 | 0 | NA | 0 | NA | NA | 11 |
| **Northern Montana** | 2,675 | 0 | NA | 0 | NA | NA | 2,675 |
| Bureau of Land Management | 668 | 0 | NA | 0 | NA | NA | 668 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 11 | 0 | NA | 0 | NA | NA | 11 |
| State | 191 | 0 | NA | 0 | NA | NA | 191 |
| Private | 1,805 | 0 | NA | 0 | NA | NA | 1,805 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Powder River Basin** | 59 | 54 | NA | 0 | NA | NA | 113 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 5 | 0 | NA | 0 | NA | NA | 5 |
| Private | 50 | 53 | NA | 0 | NA | NA | 103 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **SW Montana Conservation Area** | 42 | 0 | NA | 0 | NA | NA | 42 |
| Bureau of Land Management | 16 | 0 | NA | 0 | NA | NA | 16 |
| Forest Service | 4 | 0 | NA | 0 | NA | NA | 4 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 4 | 0 | NA | 0 | NA | NA | 4 |
| Private | 18 | 0 | NA | 0 | NA | NA | 18 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Wyoming Basin** | 371 | 0 | NA | 0 | NA | NA | 371 |
| Bureau of Land Management | 20 | 0 | NA | 0 | NA | NA | 20 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 2 | 0 | NA | 0 | NA | NA | 2 |
| State | 8 | 0 | NA | 0 | NA | NA | 8 |
| Private | 341 | 0 | NA | 0 | NA | NA | 341 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Yellowstone Watershed** | 5,646 | 1,486 | NA | 1 | NA | NA | 7,133 |
| Bureau of Land Management | 665 | 355 | NA | 0 | NA | NA | 1,020 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 41 | 0 | NA | 0 | NA | NA | 41 |
| State | 324 | 0 | NA | 0 | NA | NA | 324 |
| Private | 4,614 | 1,130 | NA | 1 | NA | NA | 5,745 |
| Other | 2 | 0 | NA | 0 | NA | NA | 2 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **485** | **421,976** | **NA** | **1** | **NA** | **NA** | **422,462** |
| **Black Rock** | 8 | 0 | NA | 0 | NA | NA | 8 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 1 | 0 | NA | 0 | NA | NA | 1 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 4 | 0 | NA | 0 | NA | NA | 4 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Butte/Buck/White Pine** | 67 | 26 | NA | 0 | NA | NA | 93 |
| Bureau of Land Management | 14 | 26 | NA | 0 | NA | NA | 40 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 6 | 0 | NA | 0 | NA | NA | 6 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 47 | 0 | NA | 0 | NA | NA | 47 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Central Elko** | 24 | 104,777 | NA | 0 | NA | NA | 104,801 |
| Bureau of Land Management | 1 | 11,582 | NA | 0 | NA | NA | 11,583 |
| Forest Service | 4 | 78,155 | NA | 0 | NA | NA | 78,159 |
| Other Federal | 0 | 329 | NA | 0 | NA | NA | 329 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 19 | 14,711 | NA | 0 | NA | NA | 14,730 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Central Great Basin** | 11 | 188 | NA | 0 | NA | NA | 199 |
| Bureau of Land Management | 3 | 187 | NA | 0 | NA | NA | 190 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 8 | 0 | NA | 0 | NA | NA | 8 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **East High Desert** | 95 | 293 | NA | 0 | NA | NA | 388 |
| Bureau of Land Management | 3 | 24 | NA | 0 | NA | NA | 27 |
| Forest Service | 0 | 269 | NA | 0 | NA | NA | 269 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 92 | 0 | NA | 0 | NA | NA | 92 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Lassen/South Washoe** | 14 | 5 | NA | 0 | NA | NA | 19 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 5 | NA | 0 | NA | NA | 6 |
| Other | 13 | 0 | NA | 0 | NA | NA | 13 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **485** | **421,976** | **NA** | **1** | **NA** | **NA** | **422,462** |
| **Likely Tables PMU** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Lone Willow** | 18 | 0 | NA | 0 | NA | NA | 18 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 17 | 0 | NA | 0 | NA | NA | 17 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Monitor** | 6 | 0 | NA | 0 | NA | NA | 6 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 3 | 0 | NA | 0 | NA | NA | 3 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 2 | 0 | NA | 0 | NA | NA | 2 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Northeast Elko** | 17 | 9,366 | NA | 0 | NA | NA | 9,383 |
| Bureau of Land Management | 1 | 4,951 | NA | 0 | NA | NA | 4,952 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 16 | 4,415 | NA | 0 | NA | NA | 4,431 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Northwest Great Basin (NV)** | 32 | 0 | NA | 0 | NA | NA | 32 |
| Bureau of Land Management | 9 | 0 | NA | 0 | NA | NA | 9 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 1 | 0 | NA | 0 | NA | NA | 1 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 22 | 0 | NA | 0 | NA | NA | 22 |
| **Northwest Interior** | 2 | 445 | NA | 0 | NA | NA | 447 |
| Bureau of Land Management | 0 | 417 | NA | 0 | NA | NA | 417 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 28 | NA | 0 | NA | NA | 29 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **485** | **421,976** | **NA** | **1** | **NA** | **NA** | **422,462** |
| **Owyhee** | 89 | 302,371 | NA | 1 | NA | NA | 302,461 |
| Bureau of Land Management | 14 | 271,984 | NA | 1 | NA | NA | 271,999 |
| Forest Service | 1 | 12,400 | NA | 0 | NA | NA | 12,401 |
| Other Federal | 0 | 117 | NA | 0 | NA | NA | 117 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 73 | 17,867 | NA | 0 | NA | NA | 17,940 |
| Other | 0 | 3 | NA | 0 | NA | NA | 3 |
| **Pueblo Range** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Ruby** | 52 | 4,505 | NA | 0 | NA | NA | 4,557 |
| Bureau of Land Management | 1 | 2,842 | NA | 0 | NA | NA | 2,843 |
| Forest Service | 3 | 136 | NA | 0 | NA | NA | 139 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 48 | 1,527 | NA | 0 | NA | NA | 1,575 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Smith/Reese** | 41 | 0 | NA | 0 | NA | NA | 41 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 38 | 0 | NA | 0 | NA | NA | 38 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Southeastern Nevada** | 9 | 0 | NA | 0 | NA | NA | 9 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 8 | 0 | NA | 0 | NA | NA | 8 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Western Pershing** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **717** | **1,850** | **NA** | **0** | **NA** | **NA** | **2,567** |
| **Baker** | 101 | 0 | NA | 0 | NA | NA | 101 |
| Bureau of Land Management | 15 | 0 | NA | 0 | NA | NA | 15 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 85 | 0 | NA | 0 | NA | NA | 85 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Beatys** | 95 | 0 | NA | 0 | NA | NA | 95 |
| Bureau of Land Management | 57 | 0 | NA | 0 | NA | NA | 57 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 21 | 0 | NA | 0 | NA | NA | 21 |
| State | 5 | 0 | NA | 0 | NA | NA | 5 |
| Private | 12 | 0 | NA | 0 | NA | NA | 12 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Brothers/N Wagontire** | 5 | 0 | NA | 0 | NA | NA | 5 |
| Bureau of Land Management | 4 | 0 | NA | 0 | NA | NA | 4 |
| Forest Service | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Bully Creek** | 34 | 176 | NA | 0 | NA | NA | 210 |
| Bureau of Land Management | 6 | 148 | NA | 0 | NA | NA | 154 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 28 | 29 | NA | 0 | NA | NA | 57 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Burns** | 2 | 0 | NA | 0 | NA | NA | 2 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Cow Lakes** | 83 | 0 | NA | 0 | NA | NA | 83 |
| Bureau of Land Management | 9 | 0 | NA | 0 | NA | NA | 9 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 74 | 0 | NA | 0 | NA | NA | 74 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **717** | **1,850** | **NA** | **0** | **NA** | **NA** | **2,567** |
| **Cow Valley** | 64 | 0 | NA | 0 | NA | NA | 64 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 62 | 0 | NA | 0 | NA | NA | 62 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Crowley** | 47 | 0 | NA | 0 | NA | NA | 47 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 45 | 0 | NA | 0 | NA | NA | 45 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Drewsey** | 30 | 0 | NA | 0 | NA | NA | 30 |
| Bureau of Land Management | 5 | 0 | NA | 0 | NA | NA | 5 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 24 | 0 | NA | 0 | NA | NA | 24 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Dry Valley/Jack Mountain** | 5 | 470 | NA | 0 | NA | NA | 475 |
| Bureau of Land Management | 4 | 470 | NA | 0 | NA | NA | 474 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Folly Farm/Saddle Butte** | 4 | 0 | NA | 0 | NA | NA | 4 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Louse Canyon** | 28 | 607 | NA | 0 | NA | NA | 635 |
| Bureau of Land Management | 17 | 607 | NA | 0 | NA | NA | 624 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 10 | 0 | NA | 0 | NA | NA | 10 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **717** | **1,850** | **NA** | **0** | **NA** | **NA** | **2,567** |
| **Paulina/12 Mile/Misery Flat** | 20 | 0 | NA | 0 | NA | NA | 20 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 17 | 0 | NA | 0 | NA | NA | 17 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Picture Rock** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Pueblos/S Steens** | 4 | 0 | NA | 0 | NA | NA | 4 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Soldier Creek** | 109 | 597 | NA | 0 | NA | NA | 706 |
| Bureau of Land Management | 34 | 93 | NA | 0 | NA | NA | 127 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 4 | 474 | NA | 0 | NA | NA | 478 |
| Private | 71 | 30 | NA | 0 | NA | NA | 101 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Steens** | 8 | 0 | NA | 0 | NA | NA | 8 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 8 | 0 | NA | 0 | NA | NA | 8 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Trout Creeks** | 70 | 0 | NA | 0 | NA | NA | 70 |
| Bureau of Land Management | 11 | 0 | NA | 0 | NA | NA | 11 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 58 | 0 | NA | 0 | NA | NA | 58 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **717** | **1,850** | **NA** | **0** | **NA** | **NA** | **2,567** |
| **Tucker Hill** | 1 | 0 | NA | 0 | NA | NA | 1 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Warners** | 7 | 0 | NA | 0 | NA | NA | 7 |
| Bureau of Land Management | 6 | 0 | NA | 0 | NA | NA | 6 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **1,584** | **42,144** | **NA** | **3** | **NA** | **NA** | **43,731** |
| **Bald Hills** | 91 | 123 | NA | 0 | NA | NA | 214 |
| Bureau of Land Management | 11 | 123 | NA | 0 | NA | NA | 134 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 2 | 0 | NA | 0 | NA | NA | 2 |
| Private | 79 | 0 | NA | 0 | NA | NA | 79 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Box Elder** | 311 | 28,061 | NA | 3 | NA | NA | 28,375 |
| Bureau of Land Management | 50 | 11,546 | NA | 1 | NA | NA | 11,597 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 4 | 2,161 | NA | 0 | NA | NA | 2,165 |
| Private | 257 | 14,353 | NA | 2 | NA | NA | 14,612 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Carbon** | 2 | 0 | NA | 0 | NA | NA | 2 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Emery** | 2 | 0 | NA | 0 | NA | NA | 2 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 2 | 0 | NA | 0 | NA | NA | 2 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Hamlin Valley** | 17 | 0 | NA | 0 | NA | NA | 17 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 17 | 0 | NA | 0 | NA | NA | 17 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Ibapah** | 20 | 0 | NA | 0 | NA | NA | 20 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 1 | 0 | NA | 0 | NA | NA | 1 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 16 | 0 | NA | 0 | NA | NA | 16 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **1,584** | **42,144** | **NA** | **3** | **NA** | **NA** | **43,731** |
| **Panguitch** | 11 | 0 | NA | 0 | NA | NA | 11 |
| Bureau of Land Management | 4 | 0 | NA | 0 | NA | NA | 4 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 6 | 0 | NA | 0 | NA | NA | 6 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Parker Mtn** | 19 | 222 | NA | 0 | NA | NA | 241 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 131 | NA | 0 | NA | NA | 131 |
| Private | 18 | 92 | NA | 0 | NA | NA | 110 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Raft River** | 7 | 87 | NA | 0 | NA | NA | 95 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 4 | 64 | NA | 0 | NA | NA | 67 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 4 | 24 | NA | 0 | NA | NA | 27 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Rich County** | 480 | 7,756 | NA | 0 | NA | NA | 8,236 |
| Bureau of Land Management | 5 | 0 | NA | 0 | NA | NA | 5 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 5 | 3,840 | NA | 0 | NA | NA | 3,845 |
| Private | 470 | 3,916 | NA | 0 | NA | NA | 4,386 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Sheeprocks** | 560 | 12 | NA | 0 | NA | NA | 572 |
| Bureau of Land Management | 97 | 10 | NA | 0 | NA | NA | 107 |
| Forest Service | 11 | 0 | NA | 0 | NA | NA | 11 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 13 | 2 | NA | 0 | NA | NA | 15 |
| Private | 439 | 0 | NA | 0 | NA | NA | 439 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Strawberry** | 14 | 4,056 | NA | 0 | NA | NA | 4,070 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 52 | NA | 0 | NA | NA | 52 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 850 | NA | 0 | NA | NA | 850 |
| Private | 13 | 3,154 | NA | 0 | NA | NA | 3,167 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **1,584** | **42,144** | **NA** | **3** | **NA** | **NA** | **43,731** |
| **Uintah-Diamond Mtn** | 50 | 1,827 | NA | 0 | NA | NA | 1,877 |
| Bureau of Land Management | 7 | 819 | NA | 0 | NA | NA | 826 |
| Forest Service | 0 | 10 | NA | 0 | NA | NA | 10 |
| Other Federal | 3 | 0 | NA | 0 | NA | NA | 3 |
| State | 6 | 219 | NA | 0 | NA | NA | 225 |
| Private | 35 | 779 | NA | 0 | NA | NA | 814 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Bear River** | 2 | 4,356 | NA | 0 | NA | NA | 4,358 |
| Bureau of Land Management | 0 | 2,970 | NA | 0 | NA | NA | 2,970 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 28 | NA | 0 | NA | NA | 28 |
| State | 0 | 137 | NA | 0 | NA | NA | 137 |
| Private | 2 | 1,221 | NA | 0 | NA | NA | 1,223 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Blacks Fork** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Buffalo** | 20 | 93 | NA | 0 | NA | NA | 113 |
| Bureau of Land Management | 0 | 5 | NA | 0 | NA | NA | 5 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 20 | 88 | NA | 0 | NA | NA | 108 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Buffalo Connectivity** | 30 | 147 | NA | 0 | NA | NA | 177 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 29 | 147 | NA | 0 | NA | NA | 176 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Continental Divide** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Daniel** | 8 | 2 | NA | 0 | NA | NA | 10 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 7 | 2 | NA | 0 | NA | NA | 9 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Douglas** | 2 | 0 | NA | 0 | NA | NA | 2 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 2 | 0 | NA | 0 | NA | NA | 2 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Elk Basin East** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Elk Basin West** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Fontenelle** | 8 | 0 | NA | 0 | NA | NA | 8 |
| Bureau of Land Management | 2 | 0 | NA | 0 | NA | NA | 2 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 6 | 0 | NA | 0 | NA | NA | 6 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Grass Creek** | 3 | 0 | NA | 0 | NA | NA | 3 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 3 | 0 | NA | 0 | NA | NA | 3 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Greater South Pass** | 40 | 38 | NA | 0 | NA | NA | 78 |
| Bureau of Land Management | 13 | 1 | NA | 0 | NA | NA | 14 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 1 | 0 | NA | 0 | NA | NA | 1 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 24 | 37 | NA | 0 | NA | NA | 61 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Hanna** | 10 | 79 | NA | 0 | NA | NA | 89 |
| Bureau of Land Management | 3 | 38 | NA | 0 | NA | NA | 41 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 1 | 40 | NA | 0 | NA | NA | 41 |
| Private | 6 | 0 | NA | 0 | NA | NA | 6 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Heart Mountain** | 3 | 0 | NA | 0 | NA | NA | 3 |
| Bureau of Land Management | 1 | 0 | NA | 0 | NA | NA | 1 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 1 | 0 | NA | 0 | NA | NA | 1 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Hyattville** | 0 | 2,173 | NA | 0 | NA | NA | 2,173 |
| Bureau of Land Management | 0 | 1,406 | NA | 0 | NA | NA | 1,406 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 239 | NA | 0 | NA | NA | 239 |
| Private | 0 | 529 | NA | 0 | NA | NA | 529 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Jackson** | 1 | 0 | NA | 0 | NA | NA | 1 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Little Mountain** | 1 | 0 | NA | 0 | NA | NA | 1 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Natrona** | 133 | 368 | NA | 0 | NA | NA | 501 |
| Bureau of Land Management | 10 | 14 | NA | 0 | NA | NA | 24 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 6 | 18 | NA | 0 | NA | NA | 24 |
| Private | 117 | 336 | NA | 0 | NA | NA | 453 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Newcastle** | 4 | 0 | NA | 0 | NA | NA | 4 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 3 | 0 | NA | 0 | NA | NA | 3 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Gillete Connectivity** | 133 | 82 | NA | 0 | NA | NA | 215 |
| Bureau of Land Management | 35 | 82 | NA | 0 | NA | NA | 117 |
| Forest Service | 6 | 0 | NA | 0 | NA | NA | 6 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 6 | 0 | NA | 0 | NA | NA | 6 |
| Private | 86 | 0 | NA | 0 | NA | NA | 86 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Gillette** | 253 | 0 | NA | 0 | NA | NA | 253 |
| Bureau of Land Management | 58 | 0 | NA | 0 | NA | NA | 58 |
| Forest Service | 13 | 0 | NA | 0 | NA | NA | 13 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 9 | 0 | NA | 0 | NA | NA | 9 |
| Private | 173 | 0 | NA | 0 | NA | NA | 173 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Glenrock** | 0 | 20 | NA | 0 | NA | NA | 20 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 20 | NA | 0 | NA | NA | 20 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **North Laramie** | 5 | 0 | NA | 0 | NA | NA | 5 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 4 | 0 | NA | 0 | NA | NA | 4 |
| Other | 1 | 0 | NA | 0 | NA | NA | 1 |
| **Oregon Basin** | 17 | 1,492 | NA | 0 | NA | NA | 1,509 |
| Bureau of Land Management | 4 | 1,483 | NA | 0 | NA | NA | 1,487 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 13 | 9 | NA | 0 | NA | NA | 22 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Powder** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Sage** | 9 | 0 | NA | 0 | NA | NA | 9 |
| Bureau of Land Management | 3 | 0 | NA | 0 | NA | NA | 3 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 1 | 0 | NA | 0 | NA | NA | 1 |
| State | 1 | 0 | NA | 0 | NA | NA | 1 |
| Private | 4 | 0 | NA | 0 | NA | NA | 4 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Salt Wells** | 3 | 8,979 | NA | 0 | NA | NA | 8,982 |
| Bureau of Land Management | 1 | 8,511 | NA | 0 | NA | NA | 8,512 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 365 | NA | 0 | NA | NA | 365 |
| Private | 1 | 103 | NA | 0 | NA | NA | 104 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Seedskadee** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Shell** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **South Rawlins** | 52 | 452 | NA | 0 | NA | NA | 504 |
| Bureau of Land Management | 2 | 48 | NA | 0 | NA | NA | 50 |
| Forest Service | 0 | 60 | NA | 0 | NA | NA | 60 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 2 | 19 | NA | 0 | NA | NA | 21 |
| Private | 48 | 326 | NA | 0 | NA | NA | 374 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |

| State<br>BSU<br>Surface Management Agency | 2017 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **846** | **26,188** | **NA** | **0** | **NA** | **NA** | **27,034** |
| **Thermopolis** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Thunder Basin** | 95 | 17 | NA | 0 | NA | NA | 112 |
| Bureau of Land Management | 4 | 0 | NA | 0 | NA | NA | 4 |
| Forest Service | 3 | 0 | NA | 0 | NA | NA | 3 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 4 | 0 | NA | 0 | NA | NA | 4 |
| Private | 84 | 17 | NA | 0 | NA | NA | 101 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Uinta** | 0 | 0 | NA | 0 | NA | NA | 0 |
| Bureau of Land Management | 0 | 0 | NA | 0 | NA | NA | 0 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 0 | 0 | NA | 0 | NA | NA | 0 |
| Private | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **Washakie** | 14 | 7,890 | NA | 0 | NA | NA | 7,904 |
| Bureau of Land Management | 0 | 6,596 | NA | 0 | NA | NA | 6,596 |
| Forest Service | 0 | 0 | NA | 0 | NA | NA | 0 |
| Other Federal | 0 | 0 | NA | 0 | NA | NA | 0 |
| State | 3 | 825 | NA | 0 | NA | NA | 828 |
| Private | 11 | 468 | NA | 0 | NA | NA | 479 |
| Other | 0 | 0 | NA | 0 | NA | NA | 0 |
| **GRAND TOTAL ALL STATES** | **14,742** | **707,357** | **NA** | **34** | **NA** | **NA** | **722,133** |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Colorado** | **4,815** | **35,807** | **21,744** | **24** | **10** | **73** | **62,474** |
| **Meeker/White River** | 110 | 0 | 84 | 0 | 0 | 0 | 194 |
| Bureau of Land Management | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 109 | 0 | 61 | 0 | 0 | 0 | 170 |
| Other | 0 | 0 | 22 | 0 | 0 | 0 | 22 |
| **Middle Park** | 93 | 427 | 2,315 | 0 | 0 | 0 | 2,835 |
| Bureau of Land Management | 19 | 0 | 851 | 0 | 0 | 0 | 870 |
| Forest Service | 0 | 0 | 33 | 0 | 0 | 0 | 33 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 6 | 316 | 138 | 0 | 0 | 0 | 460 |
| Private | 67 | 0 | 1,253 | 0 | 0 | 0 | 1,320 |
| Other | 0 | 111 | 40 | 0 | 0 | 0 | 151 |
| **North Eagle/South Routt** | 47 | 366 | 996 | 0 | 0 | 0 | 1,409 |
| Bureau of Land Management | 4 | 364 | 294 | 0 | 0 | 0 | 662 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 19 | 0 | 0 | 0 | 19 |
| Private | 43 | 1 | 681 | 0 | 0 | 0 | 725 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Park** | 53 | 163 | 3,646 | 0 | 0 | 0 | 3,861 |
| Bureau of Land Management | 5 | 52 | 1,549 | 0 | 0 | 0 | 1,606 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 14 | 100 | 169 | 0 | 0 | 0 | 283 |
| State | 1 | 0 | 353 | 0 | 0 | 0 | 354 |
| Private | 32 | 10 | 1,523 | 0 | 0 | 0 | 1,566 |
| Other | 0 | 0 | 52 | 0 | 0 | 0 | 52 |
| **Northwest Colorado** | 4,505 | 34,847 | 12,594 | 24 | 10 | 73 | 52,054 |
| Bureau of Land Management | 336 | 12,595 | 5,384 | 1 | 2 | 28 | 18,344 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 176 | 127 | 0 | 0 | 1 | 304 |
| State | 66 | 1,501 | 1,071 | 0 | 0 | 0 | 2,638 |
| Private | 4,099 | 20,544 | 5,828 | 24 | 9 | 45 | 30,549 |
| Other | 4 | 31 | 183 | 0 | 0 | 0 | 218 |
| **Parachute/Piceance/Roan** | 7 | 4 | 2,109 | 0 | 0 | 0 | 2,121 |
| Bureau of Land Management | 1 | 0 | 587 | 0 | 0 | 0 | 588 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 5 | 4 | 1,483 | 0 | 0 | 0 | 1,492 |
| Other | 0 | 0 | 39 | 0 | 0 | 0 | 39 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018<br>Cause | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** | **12,240** | **429,337** | **30,569** | **165** | **11** | **127** | **472,449** |
| **Idaho Desert Conservation Area - IHMA** | 1,101 | 26,085 | 1,776 | 0 | 0 | 28 | 28,991 |
| Bureau of Land Management | 244 | 23,119 | 922 | 0 | 0 | 26 | 24,312 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 28 | 0 | 634 | 0 | 0 | 0 | 662 |
| State | 61 | 2,012 | 32 | 0 | 0 | 0 | 2,105 |
| Private | 768 | 955 | 188 | 0 | 0 | 2 | 1,912 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Desert Conservation Area - PHMA** | 793 | 73,880 | 3,030 | 148 | 0 | 51 | 77,903 |
| Bureau of Land Management | 218 | 67,128 | 2,552 | 10 | 0 | 39 | 69,947 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 37 | 0 | 44 | 0 | 0 | 0 | 81 |
| State | 19 | 2,531 | 79 | 2 | 0 | 1 | 2,631 |
| Private | 520 | 4,221 | 356 | 136 | 0 | 11 | 5,244 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Mountain Valleys Conservation Area - IHMA** | 1,470 | 63,162 | 4,764 | 8 | 1 | 29 | 69,434 |
| Bureau of Land Management | 213 | 34,387 | 2,894 | 2 | 0 | 27 | 37,524 |
| Forest Service | 34 | 2,099 | 456 | 0 | 0 | 0 | 2,589 |
| Other Federal | 23 | 685 | 5 | 0 | 0 | 0 | 714 |
| State | 99 | 7,201 | 252 | 0 | 0 | 2 | 7,554 |
| Private | 1,100 | 18,787 | 1,155 | 5 | 0 | 1 | 21,048 |
| Other | 0 | 4 | 1 | 0 | 0 | 0 | 6 |
| **Idaho Mountain Valleys Conservation Area - PHMA** | 4,683 | 75,375 | 8,731 | 5 | 4 | 1 | 88,799 |
| Bureau of Land Management | 662 | 25,237 | 4,957 | 2 | 1 | 0 | 30,860 |
| Forest Service | 26 | 0 | 617 | 0 | 0 | 0 | 643 |
| Other Federal | 15 | 71 | 193 | 0 | 0 | 0 | 279 |
| State | 76 | 24,784 | 707 | 0 | 0 | 0 | 25,567 |
| Private | 3,905 | 25,281 | 2,256 | 2 | 3 | 1 | 31,449 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho Southern Conservation Area - IHMA** | 3,525 | 41,707 | 3,251 | 0 | 3 | 9 | 48,496 |
| Bureau of Land Management | 333 | 37,320 | 1,168 | 0 | 0 | 9 | 38,831 |
| Forest Service | 285 | 789 | 1,141 | 0 | 0 | 0 | 2,215 |
| Other Federal | 2 | 6 | 0 | 0 | 0 | 0 | 8 |
| State | 31 | 2,112 | 96 | 0 | 0 | 0 | 2,238 |
| Private | 2,875 | 1,481 | 845 | 0 | 2 | 0 | 5,204 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Idaho** *(continued)* | **12,240** | **429,337** | **30,569** | **165** | **11** | **127** | **472,449** |
| **Idaho Southern Conservation Area - PHMA** | 371 | 12,295 | 3,445 | 0 | 2 | 0 | 16,113 |
| Bureau of Land Management | 81 | 11,156 | 1,306 | 0 | 0 | 0 | 12,542 |
| Forest Service | 9 | 35 | 1,020 | 0 | 0 | 0 | 1,064 |
| Other Federal | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| State | 5 | 761 | 125 | 0 | 0 | 0 | 891 |
| Private | 276 | 343 | 994 | 0 | 2 | 0 | 1,614 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho West Owyhee Conservation Area - IHMA** | 82 | 75,092 | 1,388 | 3 | 0 | 0 | 76,566 |
| Bureau of Land Management | 53 | 62,081 | 1,059 | 0 | 0 | 0 | 63,193 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 3,660 | 87 | 0 | 0 | 0 | 3,747 |
| Private | 28 | 9,352 | 243 | 3 | 0 | 0 | 9,626 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Idaho West Owyhee Conservation Area - PHMA** | 214 | 61,740 | 4,183 | 1 | 1 | 9 | 66,148 |
| Bureau of Land Management | 73 | 52,574 | 3,338 | 0 | 0 | 6 | 55,991 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 7 | 377 | 55 | 0 | 0 | 0 | 439 |
| State | 8 | 3,238 | 217 | 0 | 0 | 1 | 3,465 |
| Private | 126 | 5,550 | 573 | 1 | 1 | 1 | 6,252 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Montana** | **188,119** | **62,921** | **36,988** | **31** | **241** | **345** | **288,645** |
| **Dakotas** | 11,980 | 1,008 | 8,372 | 0 | 25 | 6 | 21,391 |
| Bureau of Land Management | 120 | 270 | 972 | 0 | 0 | 4 | 1,366 |
| Forest Service | 63 | 88 | 677 | 0 | 0 | 0 | 829 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 302 | 11 | 709 | 0 | 1 | 0 | 1,023 |
| Private | 11,391 | 639 | 6,000 | 0 | 24 | 2 | 18,055 |
| Other | 105 | 0 | 14 | 0 | 0 | 0 | 118 |
| **Northern Montana** | 40,493 | 3,881 | 8,942 | 2 | 94 | 37 | 53,447 |
| Bureau of Land Management | 9,040 | 792 | 4,906 | 0 | 7 | 6 | 14,751 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 85 | 0 | 31 | 0 | 0 | 0 | 115 |
| State | 1,955 | 0 | 742 | 0 | 3 | 0 | 2,700 |
| Private | 29,406 | 3,089 | 3,264 | 1 | 84 | 31 | 35,874 |
| Other | 7 | 0 | 0 | 0 | 0 | 0 | 7 |
| **Powder River Basin** | 480 | 25,802 | 284 | 11 | 1 | 162 | 26,741 |
| Bureau of Land Management | 5 | 1,024 | 7 | 0 | 0 | 0 | 1,036 |
| Forest Service | 2 | 0 | 2 | 0 | 0 | 0 | 4 |
| Other Federal | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| State | 15 | 1,898 | 28 | 2 | 0 | 20 | 1,964 |
| Private | 457 | 22,879 | 246 | 9 | 1 | 142 | 23,735 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SW Montana Conservation Area** | 96 | 0 | 5,037 | 0 | 0 | 0 | 5,133 |
| Bureau of Land Management | 24 | 0 | 1,691 | 0 | 0 | 0 | 1,714 |
| Forest Service | 5 | 0 | 398 | 0 | 0 | 0 | 403 |
| Other Federal | 0 | 0 | 136 | 0 | 0 | 0 | 136 |
| State | 9 | 0 | 705 | 0 | 0 | 0 | 714 |
| Private | 57 | 0 | 2,034 | 0 | 0 | 0 | 2,091 |
| Other | 1 | 0 | 73 | 0 | 0 | 0 | 74 |
| **Wyoming Basin** | 2,393 | 525 | 1,345 | 0 | 4 | 8 | 4,274 |
| Bureau of Land Management | 140 | 506 | 509 | 0 | 0 | 8 | 1,163 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 10 | 0 | 14 | 0 | 0 | 0 | 24 |
| State | 63 | 19 | 37 | 0 | 0 | 0 | 119 |
| Private | 2,175 | 0 | 786 | 0 | 3 | 0 | 2,964 |
| Other | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| **Yellowstone Watershed** | 132,679 | 31,704 | 13,009 | 18 | 117 | 132 | 177,658 |
| Bureau of Land Management | 11,447 | 3,441 | 2,529 | 7 | 8 | 1 | 17,433 |
| Forest Service | 11 | 0 | 14 | 0 | 0 | 0 | 25 |
| Other Federal | 381 | 0 | 196 | 0 | 0 | 0 | 577 |
| State | 6,658 | 2,210 | 960 | 0 | 5 | 16 | 9,849 |
| Private | 114,177 | 26,052 | 9,309 | 11 | 104 | 115 | 149,768 |
| Other | 4 | 0 | 0 | 0 | 0 | 0 | 4 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** | **4,170** | **532,758** | **49,030** | **2** | **4** | **301** | **586,266** |
| **Black Rock** | 18 | 2,737 | 619 | 0 | 0 | 0 | 3,374 |
| Bureau of Land Management | 6 | 2,737 | 419 | 0 | 0 | 0 | 3,162 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| Other | 5 | 1 | 199 | 0 | 0 | 0 | 206 |
| **Butte/Buck/White Pine** | 157 | 26 | 4,428 | 0 | 0 | 0 | 4,611 |
| Bureau of Land Management | 33 | 26 | 4,193 | 0 | 0 | 0 | 4,252 |
| Forest Service | 0 | 0 | 93 | 0 | 0 | 0 | 93 |
| Other Federal | 19 | 0 | 8 | 0 | 0 | 0 | 28 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 104 | 0 | 134 | 0 | 0 | 0 | 238 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Central Elko** | 149 | 117,947 | 9,090 | 0 | 0 | 21 | 127,206 |
| Bureau of Land Management | 8 | 21,327 | 4,607 | 0 | 0 | 8 | 25,951 |
| Forest Service | 10 | 78,223 | 1,601 | 0 | 0 | 0 | 79,834 |
| Other Federal | 4 | 329 | 29 | 0 | 0 | 0 | 362 |
| State | 0 | 39 | 1 | 0 | 0 | 0 | 40 |
| Private | 127 | 18,029 | 2,852 | 0 | 0 | 12 | 21,020 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Central Great Basin** | 97 | 6,518 | 4,874 | 0 | 0 | 28 | 11,517 |
| Bureau of Land Management | 29 | 6,439 | 4,223 | 0 | 0 | 24 | 10,716 |
| Forest Service | 0 | 0 | 79 | 0 | 0 | 0 | 79 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 67 | 78 | 572 | 0 | 0 | 4 | 721 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **East High Desert** | 165 | 2,770 | 1,920 | 0 | 0 | 1 | 4,855 |
| Bureau of Land Management | 9 | 2,501 | 1,310 | 0 | 0 | 1 | 3,820 |
| Forest Service | 0 | 269 | 42 | 0 | 0 | 0 | 311 |
| Other Federal | 0 | 0 | 18 | 0 | 0 | 0 | 18 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 156 | 0 | 550 | 0 | 0 | 0 | 706 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Lassen/South Washoe** | 605 | 24,442 | 3,414 | 0 | 0 | 69 | 28,530 |
| Bureau of Land Management | 9 | 22,472 | 1,944 | 0 | 0 | 59 | 24,485 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| State | 2 | 402 | 38 | 0 | 0 | 0 | 441 |
| Private | 1 | 170 | 74 | 0 | 0 | 0 | 245 |
| Other | 594 | 1,398 | 1,349 | 0 | 0 | 10 | 3,351 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **4,170** | **532,758** | **49,030** | **2** | **4** | **301** | **586,266** |
| **Likely Tables PMU** | 6 | 10 | 290 | 0 | 0 | 0 | 306 |
| Bureau of Land Management | 6 | 10 | 246 | 0 | 0 | 0 | 262 |
| Forest Service | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 32 | 0 | 0 | 0 | 32 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| **Lone Willow** | 73 | 544 | 545 | 0 | 0 | 0 | 1,162 |
| Bureau of Land Management | 17 | 544 | 491 | 0 | 0 | 0 | 1,053 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 19 | 0 | 12 | 0 | 0 | 0 | 31 |
| Other | 36 | 0 | 42 | 0 | 0 | 0 | 78 |
| **Monitor** | 34 | 2 | 2,893 | 0 | 0 | 0 | 2,929 |
| Bureau of Land Management | 7 | 0 | 2,132 | 0 | 0 | 0 | 2,138 |
| Forest Service | 13 | 0 | 535 | 0 | 0 | 0 | 547 |
| Other Federal | 0 | 0 | 21 | 0 | 0 | 0 | 21 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 15 | 2 | 205 | 0 | 0 | 0 | 223 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Northeast Elko** | 20 | 18,526 | 1,598 | 0 | 0 | 48 | 20,192 |
| Bureau of Land Management | 3 | 13,209 | 1,172 | 0 | 0 | 48 | 14,432 |
| Forest Service | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 17 | 5,316 | 425 | 0 | 0 | 0 | 5,758 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Northwest Great Basin (NV)** | 476 | 969 | 5,347 | 0 | 1 | 0 | 6,793 |
| Bureau of Land Management | 114 | 236 | 3,587 | 0 | 0 | 0 | 3,937 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 4 | 710 | 1,222 | 0 | 0 | 0 | 1,937 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 358 | 22 | 538 | 0 | 1 | 0 | 919 |
| **Northwest Interior** | 21 | 1,099 | 451 | 0 | 0 | 0 | 1,572 |
| Bureau of Land Management | 19 | 830 | 324 | 0 | 0 | 0 | 1,174 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 1 | 269 | 127 | 0 | 0 | 0 | 397 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Nevada/California** *(continued)* | **4,170** | **532,758** | **49,030** | **2** | **4** | **301** | **586,266** |
| **Owyhee** | 484 | 336,726 | 7,162 | 2 | 2 | 105 | 344,482 |
| Bureau of Land Management | 66 | 296,750 | 3,722 | 1 | 1 | 45 | 300,586 |
| Forest Service | 4 | 15,633 | 2,224 | 0 | 0 | 37 | 17,897 |
| Other Federal | 2 | 117 | 13 | 0 | 0 | 0 | 132 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 411 | 24,223 | 1,202 | 0 | 2 | 23 | 25,862 |
| Other | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| **Pueblo Range** | 4 | 0 | 14 | 0 | 0 | 0 | 17 |
| Bureau of Land Management | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 4 | 0 | 9 | 0 | 0 | 0 | 13 |
| **Ruby** | 952 | 12,300 | 3,511 | 0 | 0 | 16 | 16,778 |
| Bureau of Land Management | 501 | 5,168 | 2,195 | 0 | 0 | 1 | 7,865 |
| Forest Service | 4 | 527 | 389 | 0 | 0 | 0 | 920 |
| Other Federal | 1 | 0 | 67 | 0 | 0 | 0 | 68 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 445 | 6,605 | 860 | 0 | 0 | 14 | 7,925 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Smith/Reese** | 762 | 8,135 | 1,088 | 0 | 0 | 14 | 9,999 |
| Bureau of Land Management | 428 | 8,135 | 816 | 0 | 0 | 14 | 9,392 |
| Forest Service | 34 | 0 | 135 | 0 | 0 | 0 | 169 |
| Other Federal | 1 | 0 | 39 | 0 | 0 | 0 | 39 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 298 | 0 | 99 | 0 | 0 | 0 | 397 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Southeastern Nevada** | 147 | 8 | 1,784 | 0 | 0 | 0 | 1,940 |
| Bureau of Land Management | 3 | 8 | 1,598 | 0 | 0 | 0 | 1,609 |
| Forest Service | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| Other Federal | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 145 | 0 | 173 | 0 | 0 | 0 | 317 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Western Pershing** | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Bureau of Land Management | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** | **5,078** | **187,415** | **62,063** | **21** | **18** | **53** | **254,648** |
| **Baker** | 764 | 1,852 | 5,580 | 0 | 2 | 0 | 8,198 |
| Bureau of Land Management | 75 | 344 | 2,205 | 0 | 0 | 0 | 2,624 |
| Forest Service | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Private | 689 | 1,507 | 3,369 | 0 | 2 | 0 | 5,568 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Beatys** | 179 | 1,224 | 7,192 | 0 | 1 | 0 | 8,596 |
| Bureau of Land Management | 96 | 0 | 4,875 | 0 | 0 | 0 | 4,971 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 24 | 1,224 | 1,601 | 0 | 0 | 0 | 2,849 |
| State | 27 | 0 | 117 | 0 | 0 | 0 | 143 |
| Private | 32 | 0 | 599 | 0 | 1 | 0 | 632 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Brothers/N Wagontire** | 157 | 0 | 5,135 | 0 | 0 | 0 | 5,292 |
| Bureau of Land Management | 18 | 0 | 3,410 | 0 | 0 | 0 | 3,428 |
| Forest Service | 1 | 0 | 246 | 0 | 0 | 0 | 248 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 333 | 0 | 0 | 0 | 333 |
| Private | 139 | 0 | 1,145 | 0 | 0 | 0 | 1,284 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Bully Creek** | 258 | 29,929 | 2,538 | 1 | 1 | 0 | 32,727 |
| Bureau of Land Management | 47 | 24,196 | 1,825 | 0 | 0 | 0 | 26,068 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Private | 211 | 5,733 | 711 | 1 | 1 | 0 | 6,657 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Burns** | 4 | 214 | 375 | 0 | 0 | 0 | 593 |
| Bureau of Land Management | 2 | 144 | 179 | 0 | 0 | 0 | 325 |
| Forest Service | 0 | 0 | 46 | 0 | 0 | 0 | 46 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 3 | 69 | 150 | 0 | 0 | 0 | 222 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cow Lakes** | 494 | 8,880 | 3,191 | 3 | 1 | 0 | 12,569 |
| Bureau of Land Management | 37 | 7,272 | 2,272 | 1 | 0 | 0 | 9,582 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 4 | 12 | 0 | 0 | 0 | 16 |
| Private | 457 | 1,595 | 906 | 2 | 1 | 0 | 2,962 |
| Other | 0 | 8 | 0 | 0 | 0 | 0 | 9 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **5,078** | **187,415** | **62,063** | **21** | **18** | **53** | **254,648** |
| **Cow Valley** | 1,382 | 13,201 | 5,218 | 17 | 7 | 0 | 19,824 |
| Bureau of Land Management | 55 | 1,947 | 1,129 | 1 | 0 | 0 | 3,133 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 65 | 0 | 0 | 0 | 66 |
| Private | 1,326 | 11,254 | 4,023 | 16 | 7 | 0 | 16,626 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Crowley** | 536 | 95,911 | 4,318 | 0 | 4 | 9 | 100,777 |
| Bureau of Land Management | 7 | 68,450 | 3,376 | 0 | 0 | 0 | 71,833 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 1,385 | 225 | 0 | 0 | 8 | 1,618 |
| Private | 530 | 26,075 | 718 | 0 | 4 | 1 | 27,327 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Drewsey** | 156 | 2,318 | 3,471 | 0 | 1 | 0 | 5,947 |
| Bureau of Land Management | 15 | 1,579 | 1,774 | 0 | 0 | 0 | 3,368 |
| Forest Service | 0 | 0 | 91 | 0 | 0 | 0 | 92 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 13 | 0 | 0 | 0 | 13 |
| Private | 140 | 740 | 1,593 | 0 | 1 | 0 | 2,474 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Dry Valley/Jack Mountain** | 14 | 528 | 3,915 | 0 | 0 | 0 | 4,458 |
| Bureau of Land Management | 13 | 526 | 3,748 | 0 | 0 | 0 | 4,287 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 22 | 0 | 0 | 0 | 22 |
| Private | 1 | 2 | 146 | 0 | 0 | 0 | 149 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Folly Farm/Saddle Butte** | 9 | 5,114 | 680 | 0 | 0 | 5 | 5,807 |
| Bureau of Land Management | 3 | 2,475 | 473 | 0 | 0 | 5 | 2,956 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 2,363 | 78 | 0 | 0 | 0 | 2,441 |
| Private | 6 | 276 | 128 | 0 | 0 | 0 | 410 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Louse Canyon** | 38 | 9,775 | 4,683 | 0 | 0 | 0 | 14,497 |
| Bureau of Land Management | 21 | 9,725 | 4,244 | 0 | 0 | 0 | 13,989 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 261 | 0 | 0 | 0 | 261 |
| State | 0 | 14 | 34 | 0 | 0 | 0 | 48 |
| Private | 17 | 36 | 144 | 0 | 0 | 0 | 197 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **5,078** | **187,415** | **62,063** | **21** | **18** | **53** | **254,648** |
| **Paulina/12 Mile/Misery Flat** | 588 | 1,211 | 4,218 | 0 | 0 | 40 | 6,057 |
| Bureau of Land Management | 12 | 944 | 1,381 | 0 | 0 | 29 | 2,367 |
| Forest Service | 0 | 81 | 94 | 0 | 0 | 0 | 175 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 3 | 2 | 154 | 0 | 0 | 0 | 159 |
| Private | 572 | 185 | 2,588 | 0 | 0 | 10 | 3,356 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Picture Rock** | 14 | 2,058 | 234 | 0 | 0 | 0 | 2,306 |
| Bureau of Land Management | 1 | 2,052 | 197 | 0 | 0 | 0 | 2,250 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 13 | 6 | 34 | 0 | 0 | 0 | 54 |
| Other | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| **Pueblos/S Steens** | 4 | 3,394 | 1,422 | 0 | 0 | 0 | 4,821 |
| Bureau of Land Management | 3 | 3,096 | 1,009 | 0 | 0 | 0 | 4,109 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 298 | 413 | 0 | 0 | 0 | 711 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Soldier Creek** | 275 | 7,687 | 3,062 | 0 | 0 | 0 | 11,024 |
| Bureau of Land Management | 69 | 7,112 | 2,385 | 0 | 0 | 0 | 9,566 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| State | 4 | 474 | 355 | 0 | 0 | 0 | 834 |
| Private | 201 | 101 | 318 | 0 | 0 | 0 | 620 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Steens** | 12 | 3,519 | 1,202 | 0 | 0 | 0 | 4,733 |
| Bureau of Land Management | 0 | 3,519 | 906 | 0 | 0 | 0 | 4,425 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 28 | 0 | 0 | 0 | 28 |
| State | 0 | 0 | 21 | 0 | 0 | 0 | 21 |
| Private | 12 | 0 | 247 | 0 | 0 | 0 | 258 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Trout Creeks** | 118 | 0 | 1,941 | 0 | 0 | 0 | 2,060 |
| Bureau of Land Management | 12 | 0 | 1,618 | 0 | 0 | 0 | 1,630 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 105 | 0 | 323 | 0 | 0 | 0 | 429 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Oregon** *(continued)* | **5,078** | **187,415** | **62,063** | **21** | **18** | **53** | **254,648** |
| **Tucker Hill** | 50 | 0 | 232 | 0 | 0 | 0 | 283 |
| Bureau of Land Management | 9 | 0 | 93 | 0 | 0 | 0 | 101 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 41 | 0 | 140 | 0 | 0 | 0 | 181 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Warners** | 22 | 600 | 3,456 | 0 | 0 | 0 | 4,078 |
| Bureau of Land Management | 18 | 542 | 2,512 | 0 | 0 | 0 | 3,072 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 68 | 0 | 0 | 0 | 68 |
| Private | 4 | 58 | 874 | 0 | 0 | 0 | 937 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** | **4,368** | **71,334** | **30,513** | **12** | **1** | **70** | **106,298** |
| **Bald Hills** | 220 | 509 | 1,688 | 0 | 0 | 0 | 2,416 |
| Bureau of Land Management | 40 | 468 | 1,422 | 0 | 0 | 0 | 1,929 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 41 | 114 | 0 | 0 | 0 | 157 |
| Private | 179 | 0 | 152 | 0 | 0 | 0 | 331 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Box Elder** | 1,990 | 50,093 | 2,793 | 12 | 1 | 44 | 54,932 |
| Bureau of Land Management | 199 | 18,581 | 1,059 | 3 | 0 | 38 | 19,880 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 41 | 3,695 | 121 | 0 | 0 | 0 | 3,857 |
| Private | 1,750 | 27,816 | 1,613 | 9 | 1 | 6 | 31,194 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Carbon** | 3 | 0 | 3,305 | 0 | 0 | 0 | 3,307 |
| Bureau of Land Management | 1 | 0 | 353 | 0 | 0 | 0 | 354 |
| Forest Service | 0 | 0 | 56 | 0 | 0 | 0 | 56 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 565 | 0 | 0 | 0 | 565 |
| Private | 2 | 0 | 2,331 | 0 | 0 | 0 | 2,332 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Emery** | 2 | 5 | 512 | 0 | 0 | 0 | 519 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 2 | 5 | 497 | 0 | 0 | 0 | 504 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hamlin Valley** | 20 | 0 | 767 | 0 | 0 | 0 | 787 |
| Bureau of Land Management | 0 | 0 | 519 | 0 | 0 | 0 | 519 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 53 | 0 | 0 | 0 | 53 |
| Private | 20 | 0 | 194 | 0 | 0 | 0 | 215 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Ibapah** | 22 | 2 | 254 | 0 | 0 | 0 | 278 |
| Bureau of Land Management | 3 | 0 | 124 | 0 | 0 | 0 | 127 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 1 | 2 | 95 | 0 | 0 | 0 | 98 |
| State | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Private | 18 | 0 | 23 | 0 | 0 | 0 | 41 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **4,368** | **71,334** | **30,513** | **12** | **1** | **70** | **106,298** |
| **Panguitch** | 46 | 1,601 | 2,020 | 0 | 0 | 25 | 3,692 |
| Bureau of Land Management | 5 | 0 | 864 | 0 | 0 | 0 | 869 |
| Forest Service | 0 | 1,518 | 168 | 0 | 0 | 24 | 1,710 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 173 | 0 | 0 | 0 | 174 |
| Private | 40 | 83 | 816 | 0 | 0 | 0 | 939 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Parker Mtn** | 55 | 1,640 | 3,767 | 0 | 0 | 0 | 5,462 |
| Bureau of Land Management | 2 | 299 | 1,215 | 0 | 0 | 0 | 1,517 |
| Forest Service | 1 | 0 | 1,280 | 0 | 0 | 0 | 1,281 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 641 | 994 | 0 | 0 | 0 | 1,635 |
| Private | 52 | 702 | 278 | 0 | 0 | 0 | 1,031 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Raft River** | 18 | 159 | 586 | 0 | 0 | 0 | 764 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 14 | 136 | 541 | 0 | 0 | 0 | 691 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 4 | 24 | 46 | 0 | 0 | 0 | 73 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rich County** | 794 | 7,877 | 5,577 | 0 | 0 | 0 | 14,248 |
| Bureau of Land Management | 14 | 6 | 773 | 0 | 0 | 0 | 793 |
| Forest Service | 0 | 0 | 74 | 0 | 0 | 0 | 74 |
| Other Federal | 1 | 0 | 40 | 0 | 0 | 0 | 41 |
| State | 13 | 3,870 | 436 | 0 | 0 | 0 | 4,318 |
| Private | 767 | 4,001 | 4,253 | 0 | 0 | 0 | 9,021 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Sheeprocks** | 1,051 | 3,014 | 3,518 | 0 | 0 | 1 | 7,584 |
| Bureau of Land Management | 149 | 2,031 | 1,807 | 0 | 0 | 0 | 3,987 |
| Forest Service | 20 | 409 | 898 | 0 | 0 | 0 | 1,328 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 15 | 535 | 189 | 0 | 0 | 1 | 740 |
| Private | 866 | 38 | 623 | 0 | 0 | 0 | 1,528 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Strawberry** | 50 | 4,056 | 2,278 | 0 | 0 | 0 | 6,384 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 10 | 52 | 748 | 0 | 0 | 0 | 810 |
| Other Federal | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| State | 4 | 850 | 593 | 0 | 0 | 0 | 1,447 |
| Private | 36 | 3,154 | 929 | 0 | 0 | 0 | 4,119 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Utah** *(continued)* | **4,368** | **71,334** | **30,513** | **12** | **1** | **70** | **106,298** |
| **Uintah-Diamond Mtn** | 98 | 2,378 | 3,449 | 0 | 0 | 0 | 5,925 |
| Bureau of Land Management | 10 | 1,079 | 1,484 | 0 | 0 | 0 | 2,573 |
| Forest Service | 0 | 10 | 374 | 0 | 0 | 0 | 384 |
| Other Federal | 4 | 0 | 169 | 0 | 0 | 0 | 172 |
| State | 13 | 340 | 310 | 0 | 0 | 0 | 663 |
| Private | 72 | 950 | 1,112 | 0 | 0 | 0 | 2,133 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Bear River** | 32 | 4,356 | 73 | 0 | 0 | 0 | 4,461 |
| Bureau of Land Management | 1 | 2,970 | 39 | 0 | 0 | 0 | 3,010 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 28 | 3 | 0 | 0 | 0 | 31 |
| State | 0 | 137 | 6 | 0 | 0 | 0 | 143 |
| Private | 31 | 1,221 | 25 | 0 | 0 | 0 | 1,277 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Blacks Fork** | 3 | 0 | 1,104 | 0 | 0 | 0 | 1,107 |
| Bureau of Land Management | 1 | 0 | 387 | 0 | 0 | 0 | 387 |
| Forest Service | 1 | 0 | 226 | 0 | 0 | 0 | 226 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 33 | 0 | 0 | 0 | 33 |
| Private | 2 | 0 | 458 | 0 | 0 | 0 | 460 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Buffalo** | 72 | 653 | 2,130 | 0 | 0 | 1 | 2,856 |
| Bureau of Land Management | 2 | 83 | 158 | 0 | 0 | 0 | 243 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 159 | 0 | 0 | 0 | 160 |
| Private | 68 | 570 | 1,813 | 0 | 0 | 1 | 2,452 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Buffalo Connectivity** | 175 | 32,157 | 830 | 2 | 0 | 25 | 33,190 |
| Bureau of Land Management | 8 | 4,830 | 23 | 0 | 0 | 0 | 4,861 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 1,852 | 47 | 0 | 0 | 0 | 1,899 |
| Private | 168 | 25,476 | 761 | 2 | 0 | 25 | 26,431 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Continental Divide** | 0 | 0 | 721 | 0 | 0 | 0 | 721 |
| Bureau of Land Management | 0 | 0 | 383 | 0 | 0 | 0 | 383 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Private | 0 | 0 | 335 | 0 | 0 | 0 | 335 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Daniel** | 14 | 2 | 3,167 | 0 | 0 | 0 | 3,182 |
| Bureau of Land Management | 1 | 0 | 1,375 | 0 | 0 | 0 | 1,377 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 206 | 0 | 0 | 0 | 206 |
| Private | 12 | 2 | 1,581 | 0 | 0 | 0 | 1,595 |
| Other | 0 | 0 | 4 | 0 | 0 | 0 | 4 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Douglas** | 367 | 780 | 336 | 0 | 1 | 0 | 1,484 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 3 | 0 | 29 | 0 | 0 | 0 | 32 |
| Private | 365 | 780 | 307 | 0 | 0 | 0 | 1,452 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Elk Basin East** | 0 | 0 | 118 | 0 | 0 | 0 | 118 |
| Bureau of Land Management | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 16 | 0 | 0 | 0 | 16 |
| State | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| Private | 0 | 0 | 79 | 0 | 0 | 0 | 79 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| **Elk Basin West** | 20 | 0 | 125 | 0 | 0 | 0 | 145 |
| Bureau of Land Management | 0 | 0 | 17 | 0 | 0 | 0 | 17 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Private | 20 | 0 | 103 | 0 | 0 | 0 | 123 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fontenelle** | 33 | 0 | 1,929 | 0 | 0 | 0 | 1,962 |
| Bureau of Land Management | 14 | 0 | 1,476 | 0 | 0 | 0 | 1,491 |
| Forest Service | 0 | 0 | 50 | 0 | 0 | 0 | 50 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 0 | 88 | 0 | 0 | 0 | 91 |
| Private | 16 | 0 | 314 | 0 | 0 | 0 | 330 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grass Creek** | 13 | 1 | 534 | 0 | 0 | 0 | 548 |
| Bureau of Land Management | 3 | 0 | 207 | 0 | 0 | 0 | 210 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 39 | 0 | 0 | 0 | 40 |
| Private | 9 | 1 | 289 | 0 | 0 | 0 | 299 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Greater South Pass** | 1,412 | 573 | 21,131 | 0 | 1 | 0 | 23,118 |
| Bureau of Land Management | 43 | 408 | 15,212 | 0 | 0 | 0 | 15,663 |
| Forest Service | 0 | 2 | 15 | 0 | 0 | 0 | 16 |
| Other Federal | 14 | 0 | 358 | 0 | 0 | 0 | 373 |
| State | 16 | 8 | 1,436 | 0 | 0 | 0 | 1,460 |
| Private | 1,332 | 155 | 4,097 | 0 | 1 | 0 | 5,585 |
| Other | 6 | 0 | 14 | 0 | 0 | 0 | 20 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Hanna** | 47 | 79 | 4,931 | 0 | 0 | 0 | 5,058 |
| Bureau of Land Management | 7 | 38 | 1,899 | 0 | 0 | 0 | 1,944 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 52 | 0 | 0 | 0 | 52 |
| State | 3 | 40 | 361 | 0 | 0 | 0 | 404 |
| Private | 36 | 0 | 2,606 | 0 | 0 | 0 | 2,643 |
| Other | 1 | 0 | 12 | 0 | 0 | 0 | 14 |
| **Heart Mountain** | 24 | 0 | 366 | 0 | 0 | 0 | 390 |
| Bureau of Land Management | 4 | 0 | 125 | 0 | 0 | 0 | 129 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 13 | 0 | 0 | 0 | 13 |
| State | 1 | 0 | 39 | 0 | 0 | 0 | 40 |
| Private | 19 | 0 | 189 | 0 | 0 | 0 | 208 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hyattville** | 68 | 2,447 | 945 | 0 | 0 | 0 | 3,461 |
| Bureau of Land Management | 5 | 1,672 | 739 | 0 | 0 | 0 | 2,416 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 243 | 111 | 0 | 0 | 0 | 355 |
| Private | 62 | 533 | 96 | 0 | 0 | 0 | 691 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Jackson** | 2 | 27 | 465 | 0 | 0 | 0 | 494 |
| Bureau of Land Management | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forest Service | 0 | 27 | 424 | 0 | 0 | 0 | 451 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 1 | 0 | 41 | 0 | 0 | 0 | 41 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Little Mountain** | 7 | 86 | 309 | 0 | 0 | 0 | 402 |
| Bureau of Land Management | 1 | 86 | 223 | 0 | 0 | 0 | 310 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| Private | 5 | 0 | 77 | 0 | 0 | 0 | 82 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Natrona** | 848 | 2,281 | 11,505 | 1 | 2 | 4 | 14,641 |
| Bureau of Land Management | 81 | 558 | 5,125 | 0 | 0 | 0 | 5,765 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 7 | 0 | 75 | 0 | 0 | 0 | 83 |
| State | 33 | 633 | 1,552 | 0 | 0 | 0 | 2,218 |
| Private | 722 | 1,090 | 4,750 | 1 | 2 | 4 | 6,569 |
| Other | 4 | 0 | 2 | 0 | 0 | 0 | 6 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Newcastle** | 170 | 238 | 1,058 | 0 | 0 | 0 | 1,467 |
| Bureau of Land Management | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Forest Service | 8 | 93 | 603 | 0 | 0 | 0 | 705 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 12 | 103 | 70 | 0 | 0 | 0 | 186 |
| Private | 148 | 41 | 382 | 0 | 0 | 0 | 572 |
| Other | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| **North Gillete Connectivity** | 1,099 | 775 | 389 | 0 | 2 | 0 | 2,265 |
| Bureau of Land Management | 172 | 242 | 31 | 0 | 0 | 0 | 446 |
| Forest Service | 16 | 23 | 84 | 0 | 0 | 0 | 123 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 52 | 332 | 32 | 0 | 0 | 0 | 417 |
| Private | 855 | 177 | 242 | 0 | 2 | 0 | 1,276 |
| Other | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| **North Gillette** | 757 | 831 | 944 | 1 | 1 | 0 | 2,534 |
| Bureau of Land Management | 63 | 17 | 15 | 0 | 0 | 0 | 95 |
| Forest Service | 51 | 15 | 594 | 0 | 0 | 0 | 660 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 27 | 0 | 18 | 0 | 0 | 0 | 45 |
| Private | 616 | 799 | 317 | 1 | 1 | 0 | 1,734 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Glenrock** | 5 | 567 | 548 | 0 | 0 | 1 | 1,121 |
| Bureau of Land Management | 1 | 179 | 138 | 0 | 0 | 0 | 318 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 58 | 78 | 0 | 0 | 0 | 138 |
| Private | 2 | 329 | 332 | 0 | 0 | 1 | 665 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **North Laramie** | 6 | 0 | 501 | 0 | 0 | 0 | 508 |
| Bureau of Land Management | 0 | 0 | 40 | 0 | 0 | 0 | 40 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 73 | 0 | 0 | 0 | 73 |
| Private | 5 | 0 | 382 | 0 | 0 | 0 | 387 |
| Other | 1 | 0 | 6 | 0 | 0 | 0 | 7 |
| **Oregon Basin** | 179 | 1,737 | 2,229 | 0 | 0 | 0 | 4,145 |
| Bureau of Land Management | 26 | 1,662 | 1,208 | 0 | 0 | 0 | 2,896 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 19 | 6 | 151 | 0 | 0 | 0 | 176 |
| Private | 131 | 69 | 870 | 0 | 0 | 0 | 1,071 |
| Other | 2 | 0 | 0 | 0 | 0 | 0 | 2 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Powder** | 0 | 0 | 28 | 0 | 0 | 0 | 28 |
| Bureau of Land Management | 0 | 0 | 24 | 0 | 0 | 0 | 24 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| Private | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Sage** | 57 | 0 | 3,744 | 0 | 0 | 0 | 3,802 |
| Bureau of Land Management | 16 | 0 | 2,145 | 0 | 0 | 0 | 2,162 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 1 | 0 | 40 | 0 | 0 | 0 | 41 |
| State | 5 | 0 | 318 | 0 | 0 | 0 | 323 |
| Private | 35 | 0 | 1,232 | 0 | 0 | 0 | 1,267 |
| Other | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| **Salt Wells** | 13 | 10,502 | 1,406 | 0 | 0 | 0 | 11,921 |
| Bureau of Land Management | 4 | 9,532 | 1,071 | 0 | 0 | 0 | 10,608 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 2 | 448 | 61 | 0 | 0 | 0 | 511 |
| Private | 6 | 522 | 274 | 0 | 0 | 0 | 802 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Seedskadee** | 0 | 0 | 115 | 0 | 0 | 0 | 115 |
| Bureau of Land Management | 0 | 0 | 42 | 0 | 0 | 0 | 42 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 24 | 0 | 0 | 0 | 24 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 48 | 0 | 0 | 0 | 48 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Shell** | 87 | 70 | 66 | 0 | 0 | 0 | 224 |
| Bureau of Land Management | 2 | 68 | 24 | 0 | 0 | 0 | 95 |
| Forest Service | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| Private | 85 | 1 | 38 | 0 | 0 | 0 | 125 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **South Rawlins** | 251 | 453 | 4,888 | 0 | 0 | 0 | 5,593 |
| Bureau of Land Management | 3 | 49 | 1,980 | 0 | 0 | 0 | 2,032 |
| Forest Service | 0 | 60 | 3 | 0 | 0 | 0 | 63 |
| Other Federal | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| State | 3 | 19 | 481 | 0 | 0 | 0 | 503 |
| Private | 245 | 326 | 2,351 | 0 | 0 | 0 | 2,923 |
| Other | 0 | 0 | 68 | 0 | 0 | 0 | 68 |

| State<br>BSU<br>Surface Management Agency | Cumulative 2012 - 2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cause | | | | | | |
| | Agriculture Conversion | Fire | Impervious Surface | Agriculture Conversion and Fire | Agriculture Conversion and Impervious Surface | Fire and Impervious Surface | Total |
| **Wyoming** *(continued)* | **7,914** | **72,326** | **77,135** | **45** | **11** | **31** | **157,461** |
| **Thermopolis** | 0 | 0 | 56 | 0 | 0 | 0 | 56 |
| Bureau of Land Management | 0 | 0 | 14 | 0 | 0 | 0 | 14 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Private | 0 | 0 | 41 | 0 | 0 | 0 | 42 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Thunder Basin** | 2,000 | 3,374 | 6,640 | 31 | 4 | 0 | 12,048 |
| Bureau of Land Management | 29 | 534 | 135 | 10 | 0 | 0 | 709 |
| Forest Service | 46 | 348 | 3,700 | 0 | 0 | 0 | 4,094 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 74 | 74 | 302 | 0 | 0 | 0 | 451 |
| Private | 1,846 | 2,418 | 2,502 | 20 | 3 | 0 | 6,788 |
| Other | 5 | 0 | 1 | 0 | 0 | 0 | 6 |
| **Uinta** | 33 | 0 | 1,267 | 0 | 0 | 0 | 1,300 |
| Bureau of Land Management | 2 | 0 | 948 | 0 | 0 | 0 | 951 |
| Forest Service | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 1 | 0 | 38 | 0 | 0 | 0 | 39 |
| Private | 30 | 0 | 278 | 0 | 0 | 0 | 309 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Washakie** | 117 | 10,337 | 2,532 | 0 | 0 | 0 | 12,986 |
| Bureau of Land Management | 5 | 8,506 | 1,478 | 0 | 0 | 0 | 9,990 |
| Forest Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 31 | 957 | 240 | 0 | 0 | 0 | 1,228 |
| Private | 80 | 873 | 814 | 0 | 0 | 0 | 1,767 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **GRAND TOTAL ALL STATES** | **228,286** | **1,394,985** | **311,552** | **290** | **299** | **1,034** | **1,936,446** |

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U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 7: California State Office Monitoring Report for the 2015 Nevada and Northeastern California Subregion Land Use Plan Amendment

2015–2020

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# Appendix 7: California State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 7: California State Office Monitoring Report for the 2015 Nevada and Northeastern California Subregion Land Use Plan Amendment

## 2015–2020


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# Introduction

This BLM California State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (Rangewide GRSG Monitoring Report). This appendix describes the methods, datasets, and results of implementation and monitoring of GRSG conservation measures from the land use plan amendment in northeastern California covered by the 2015 GRSG Record of Decision (ROD). The Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 planning-wide monitoring efforts for GRSG conservation using datasets and methods found in the BLM and USFS Greater Sage-Grouse Monitoring Framework (Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions covered by the RODs.

The structure for the Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (five questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments (four questions). This appendix summarizes implementation data and information specific to the Nevada and Northeastern California GRSG Amendment applicable to BLM California managed lands and answers the following four questions:

1. Are the plans meeting the Habitat Objectives for GRSG (table 2-2)?
2. Are GRSG Habitat Management Areas (HMAs) within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Biodiversity Standard (special status species/wildlife)?
3. Is the plan meeting the disturbance cap objective(s) within GRSG HMAs?
4. Are GRSG populations within this plan boundary and within the GRSG HMAs increasing, stable, or declining?

# Methods

The BLM California State Office monitored four factors (one factor per monitoring question) in the land use plan amendment (LUPA) designated GRSG HMAs within the planning area in California:

- Habitat conditions within northeastern California and lands managed in northwestern Nevada, as articulated in the Habitat Objectives for GRSG (table 2-2) and Adaptive Management Habitat Triggers;
- Land health standards evaluations;
- Surface disturbance in Priority Habitat Management Areas (PHMA); and
- GRSG population trends (in coordination with California and Nevada state wildlife agencies).

BLM California used the following methods for the four factors.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives for GRSG (table 2-2) and Adaptive Management Habitat Triggers

### 1.1. Habitat conditions statewide

Summaries of 11 indicators of importance to GRSG rangewide were generated within GRSG habitat (type I) and outside of GRSG habitat (type II) on BLM California managed lands. These indicators are generally recognized as important components of GRSG habitat quality (e.g., sagebrush cover) or

potential threats to habitat quality (e.g., invasive species), and many are also identified in the Habitat Objectives for GRSG (table 2-2). These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the rangewide report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from the BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017, **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**).

More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

### 1.2. Habitat conditions within GRSG seasonal habitats

Summaries of LMF and field office collected AIM data were generated to evaluate how frequently quantitative Habitat Objectives for GRSG (table 2-2), as detailed in the 2015 LUPA, were met within GRSG seasonal habitats within HMAs. Seasonal habitats include breeding (lek), nesting, early brood-rearing, late-brood rearing, and winter. Seasonal habitats were initially mapped by USGS in 2016 (Spatially explicit modeling of annual and seasonal habitat for greater sage-grouse (*Centrocercus urophasianus*) in Nevada and Northeastern California—An updated decision-support tool for management. Open-File Report 2016-1080) and then replaced in 2017 and 2019 by models developed by California BLM. The models are based on GRSG lek locations, telemetry points, vegetation, elevation, and other spatial data. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. They are not weighted to represent the overall area sampled.

### 1.3. Habitat conditions – adaptive management habitat triggers

The methods described in the 2015 LUPA to determine whether soft and/or hard habitat triggers had been tripped could not be implemented and habitat triggers could not be determined in California without revising the methods and amending the 2015 LUPA. The revisions were included in the 2019 LUPA, but, due to the 2019 preliminary injunction, BLM California is unable to implement the 2019 Adaptive Management Strategy. However, the State of Nevada has adopted the same strategy as part of their State's Sage-Grouse Conservation Plan and is moving forward with implementing the strategy in cooperation with BLM California and Nevada, California and Nevada state wildlife agencies, local working groups and other partners. The State of Nevada identified one habitat trigger that has been tripped on BLM California managed lands in Nevada.

Note that these methods apply to this specific BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the Biologically Significant Unit (BSU) scale.

## 2. Land Health Standards (LHS) Evaluations

Summarized data for allotments that contain GRSG HMAs in the planning area was used to address this factor. This data is summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in Category A and B. BLM acres in Category A allotments that contain GRSG

habitat have achieved all LHS or significant progress toward achieving LHS is being made. Category B allotments that contain GRSG habitat are not achieving all LHS and grazing was identified as the causal factor. Grazing management in this category has been or is in the process of being modified to make progress towards achieving LHS.

**2.1.** The California BLM State Office tracked completion of LHS evaluations by entering the results into the RIME database and compiled annual reports. Results are also discussed in National Environmental Policy Act (NEPA) documents and associated project files. The determination of whether the GRSG portion of the Biodiversity Standard (Wildlife standard) was met or making progress towards meeting the standard for each of the evaluations was compiled with a data call to the northeastern California field offices.

## 3. Surface Disturbance in PHMA

The methods used to track the number of BLM-authorized surface disturbing actions in GRSG PHMA within the planning area included field office staff submitting project proposal forms to the district GIS specialist. The GIS specialist then used the Surface Disturbance and Reclamation Tracking Tool (SDARTT) to track the amount of disturbance associated with each proposal prior to authorization in PHMA. In addition, the California State Office Sage-Grouse Lead reviewed all projects proposed in GRSG HMAs and maintained a spreadsheet.

Note that the methods previously described apply at the project scale. The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.

## 4. GRSG Population Trends (in cooperation with the California and Nevada state wildlife agencies)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following 2015 LUPA-defined methodology: The 2015 LUPA incorporated an adaptive management strategy that included population triggers for leks, lek clusters, and BSUs across the planning area. Calculating the 2015 adaptive management population triggers required the use of a hierarchical population model that was created by USGS in partnership with the BLM, USFWS, Nevada Department of Wildlife, and the California Department of Fish and Wildlife. Shortly after the signing of the ROD approving the 2015 LUPA, USGS revised the model with the best available and updated data, which in turn modified the numeric triggers contained in the 2015 LUPA (See appendix J of the 2015 LUPA and *Hierarchical population monitoring of greater sage-grouse (*Centrocercus urophasianus*) in Nevada and California—Identifying populations for management at the appropriate spatial scale*: U.S. Geological Survey Open-File Report 2017-1089, https://doi.org/10.3133/ofr20171089). Due to this, as part of the 2019 plan amendment process, the BLM analyzed and adopted the updated numeric population triggers and the updated USGS model to calculate population triggers on an annual basis.

Due to the 2019 preliminary injunction, BLM California is unable to implement the 2019 Adaptive Management Strategy. However, the State of Nevada has adopted the same strategy as part of their State's Sage-Grouse Conservation Plan and is moving forward with implementing the strategy in cooperation with BLM Nevada and California, NDOW, local working groups and other partners. The latest model results identified one population soft trigger that has been tripped on BLM California managed lands.

# Results

This section describes the results of implementation and monitoring of GRSG LUPA conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance, and GRSG population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives for GRSG (table 2-2) and Adaptive Management Habitat Triggers

### 1.1. Habitat conditions statewide from LMF data analyses

Weighted annual average estimates of key habitat components measured during 2013-2018 were used to determine average habitat conditions and trends.

| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | CA | 8 | 561,001 |
| 2013 | II | CA | 58 | 14,155,777 |
| 2014 | I | CA | 25 | 561,013 |
| 2014 | II | CA | 90 | 14,573,792 |
| 2015 | I | CA | 22 | 561,004 |
| 2015 | II | CA | 88 | 14,068,154 |
| 2016 | I | CA | 33 | 563,047 |
| 2016 | II | CA | 133 | 13,976,184 |
| 2017 | I | CA | 24 | 560,615 |
| 2017 | II | CA | 96 | 13,611,814 |
| 2018 | I | CA | 23 | 561,680 |
| 2018 | II | CA | 90 | 13,131,913 |

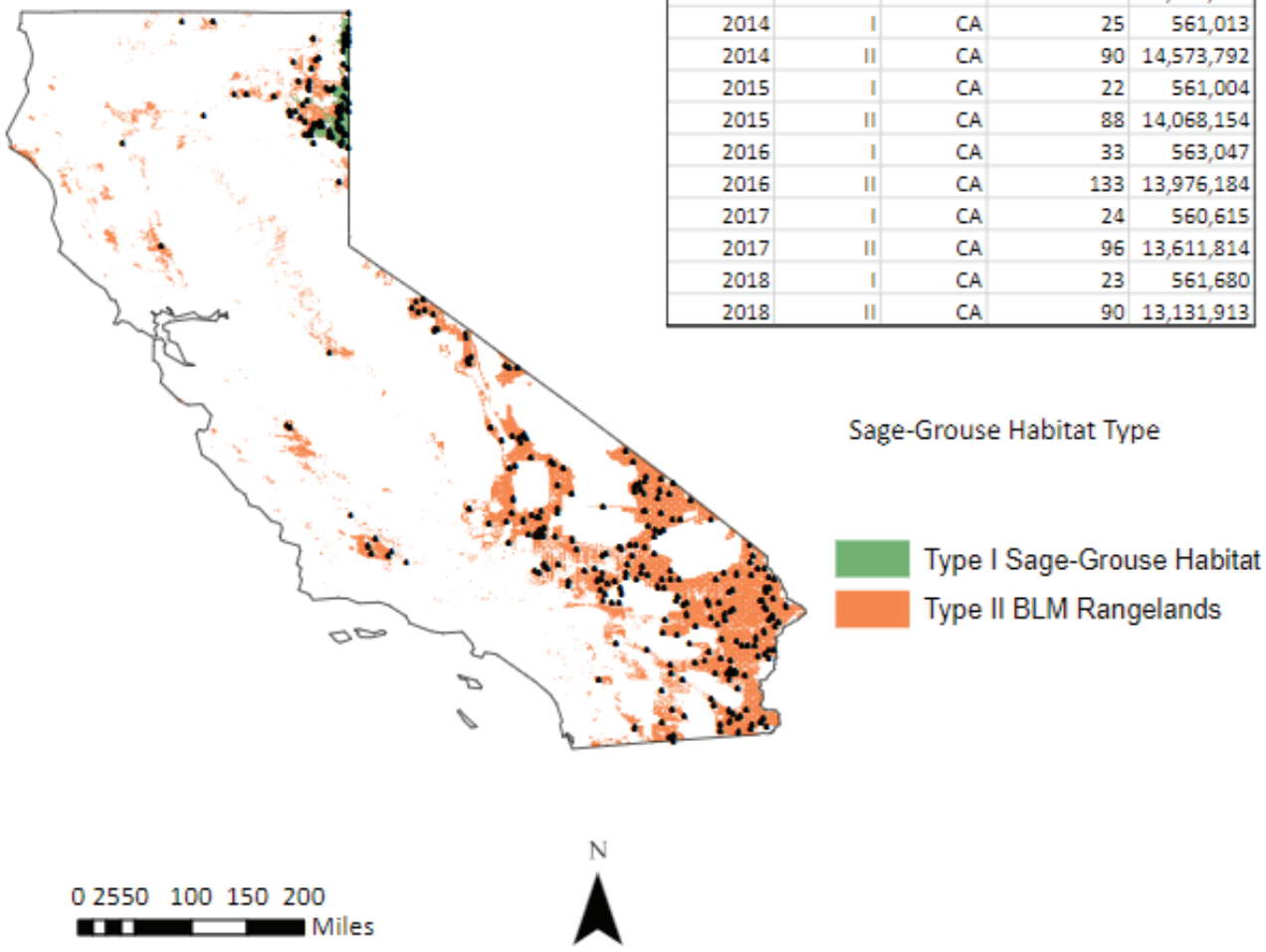
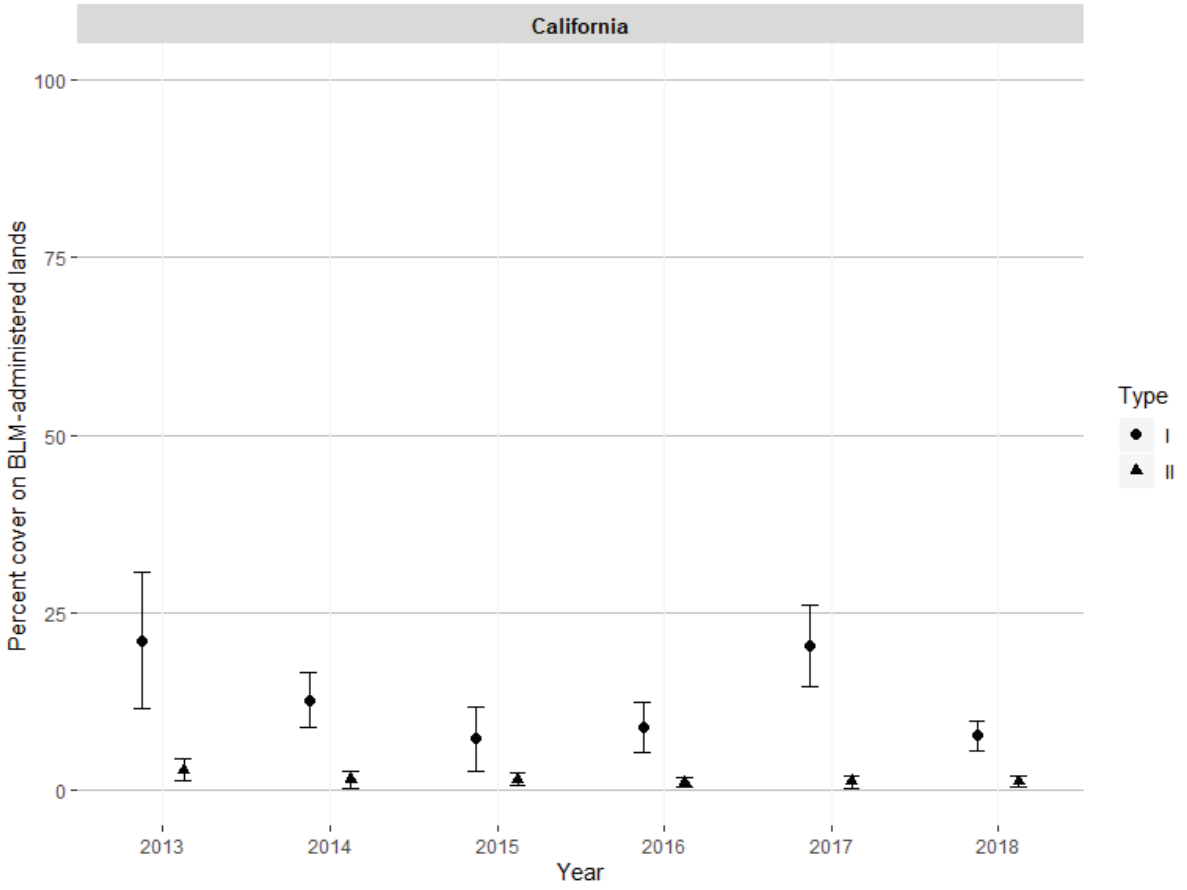



**Figure 1.** Map of plot locations used to derive statewide estimates.

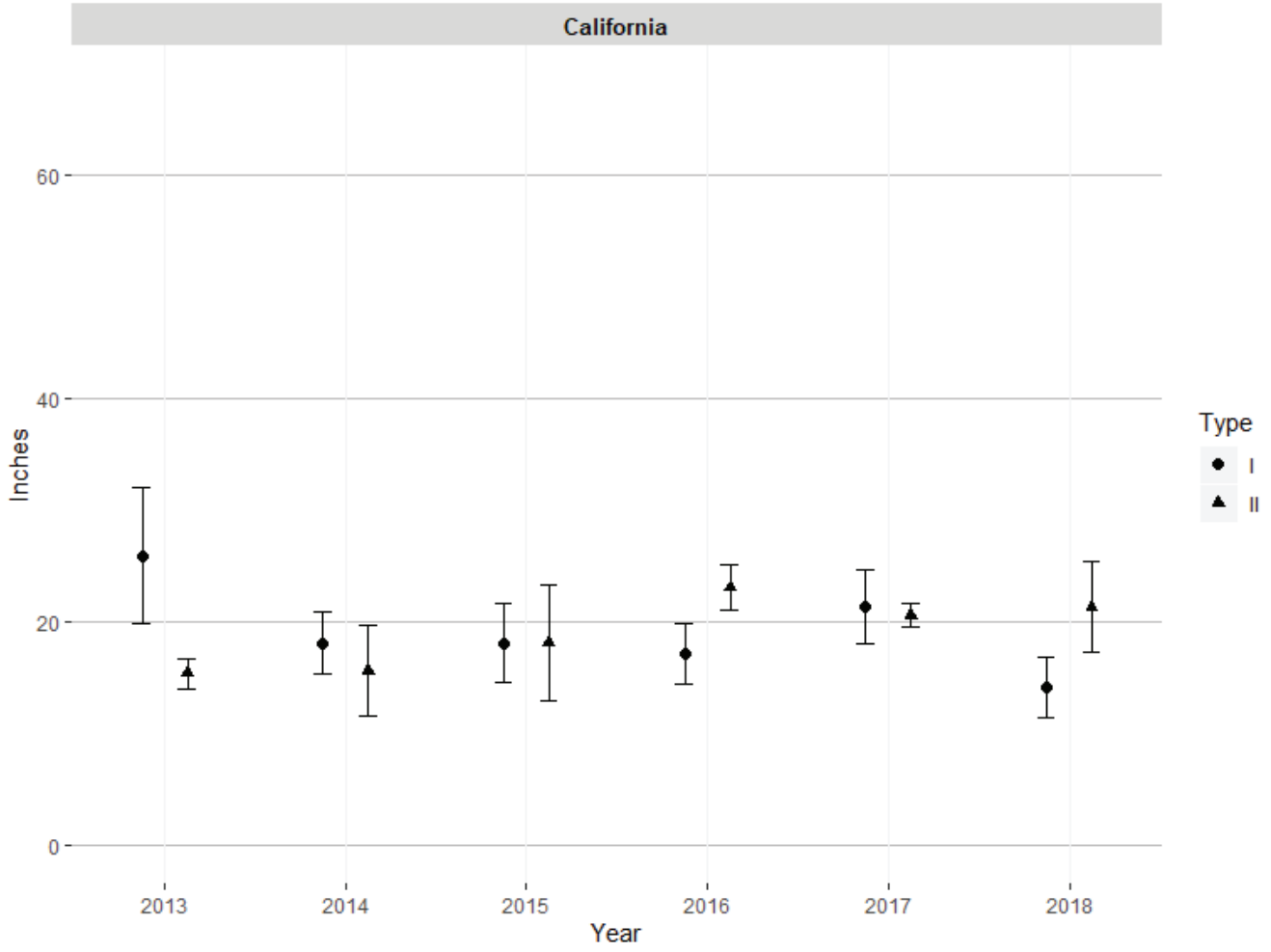
### 1.1.1. Additional Indicators for Habitat (type I) and Nonhabitat (type II) within California BLM Managed Lands

Average percent of sagebrush cover in type I habitat declined from 2013 through 2018 (figure 2). Sagebrush height followed the same pattern as sagebrush cover in type I GRSG habitat (figure 3). Columnar shaped sagebrush decreased to zero percent from 2013 to 2018 (figure 4) and sagebrush plants that are spreading in shape increased to 100 percent since 2013 (figure 5). Perennial grass and forb cover decreased substantially from 2013 through 2018 (figure 6). Herbaceous plant height in GRSG habitat type I remained consistent, ranging from 10-14 inches (figure 7). Since 2015, percent bare ground has declined to 15 percent (figure 8). The percentage of vegetation composed of nonnative invasive species increased from 2013 and 2018 (figures 9 and 11) as well as annual grasses (figure 10).



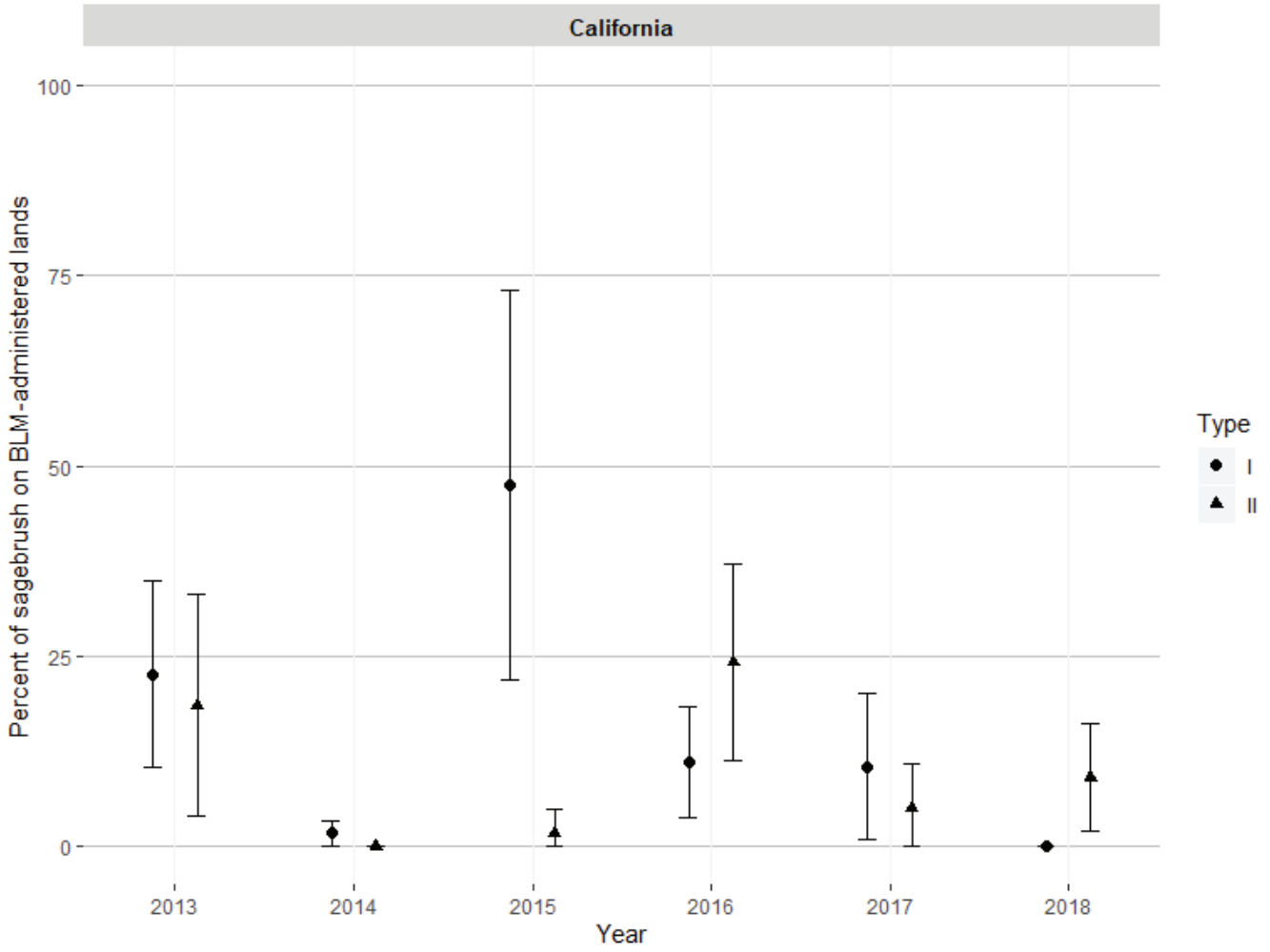

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | **Type I** | | | | | |
| | 21% (+10/-10) | 13% (+4/-4) | 7% (+5/-5) | 9% (+4/-4) | 20% (+6/-6) | 8% (+2/-2) |
| | **Type II** | | | | | |
| | 3% (+2/-2) | 1% (+1/-1) | 2% (+1/-1) | 1% (+1/-1) | 1% (+1/-1) | 1% (+1/-1) |

**Figure 2.** Percent cover of sagebrush on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.



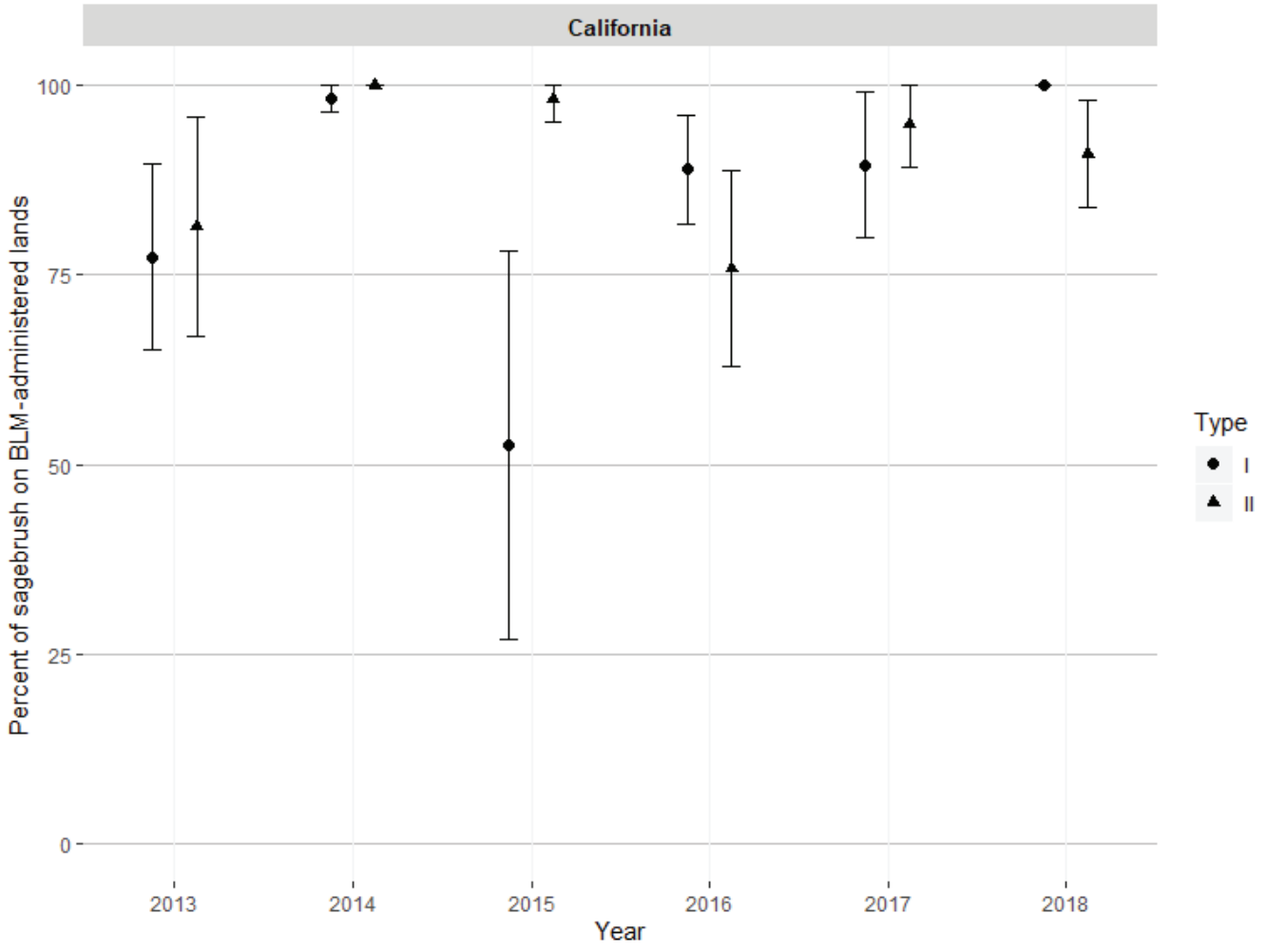

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Mean sagebrush species height in inches on BLM rangelands | **Type I** | | | | | |
| | 25.99 (+6.13/-6.13) | 18.13 (+2.78/-2.79) | 18.15 (+3.49/-3.49) | 17.25 (+2.71/-2.7) | 21.39 (+3.3/-3.3) | 14.17 (+2.65/-2.65) |
| | **Type II** | | | | | |
| | 15.45 (+1.36/-1.37) | 15.67 (+4.02/-4.03) | 18.15 (+5.19/-5.19) | 23.08 (+2.04/-2.04) | 20.64 (+1.05/-1.06) | 21.41 (+4.11/-4.12) |

**Figure 3.** Mean sagebrush species height in inches on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.



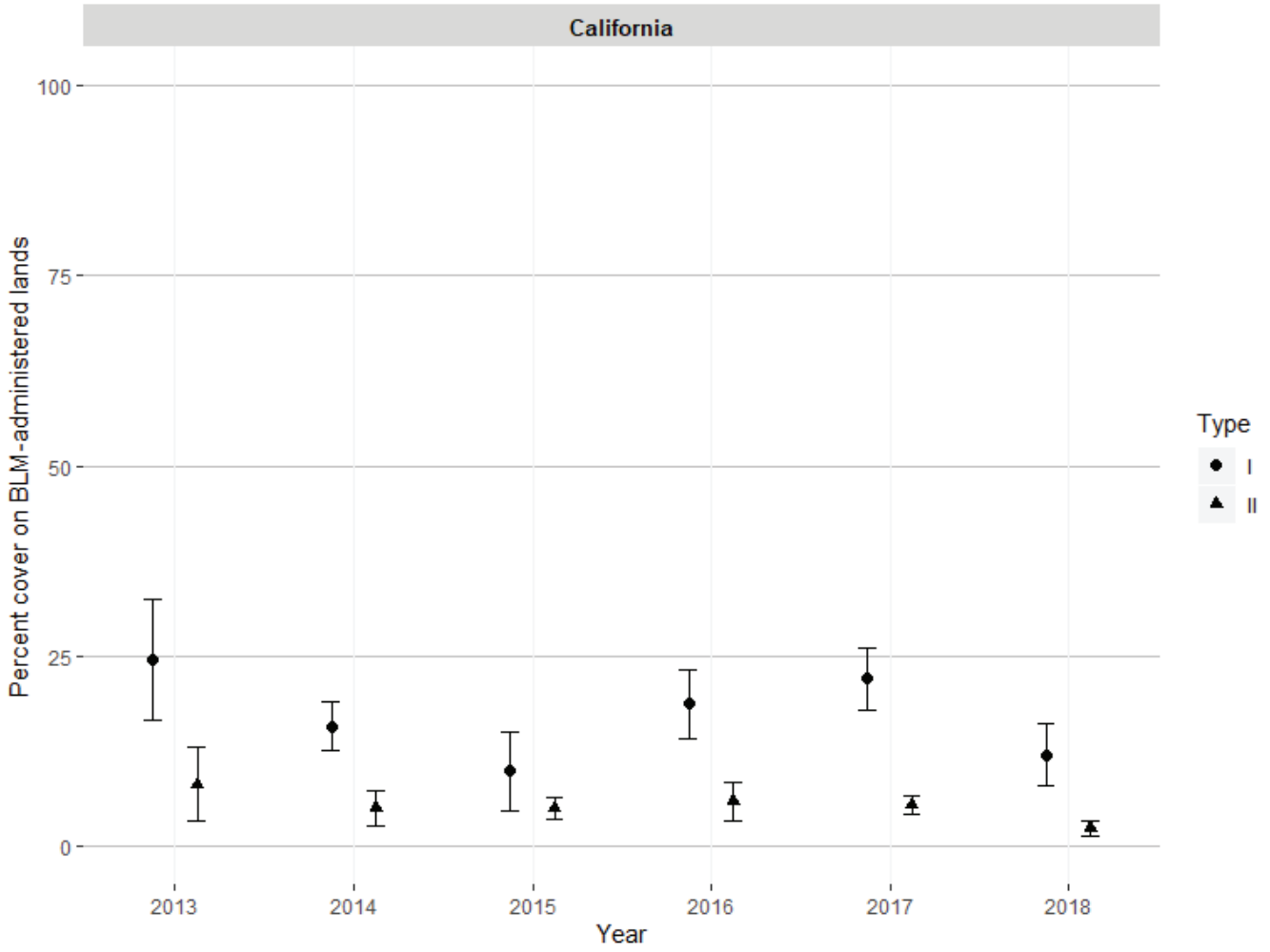

| Proportion of sagebrush that is columnar shaped on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 23% (+12/-12) | 2% (+2/-2) | 47% (+26/-26) | 11% (+7/-7) | 11% (+10/-10) | 0% (+0/-0) |
| | **Type II** | | | | | |
| | 19% (+15/-14) | 0% (+0/-0) | 2% (+3/-2) | 24% (+13/-13) | 5% (+6/-5) | 9% (+7/-7) |

**Figure 4.** Proportion of sagebrush that is columnar shaped on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.



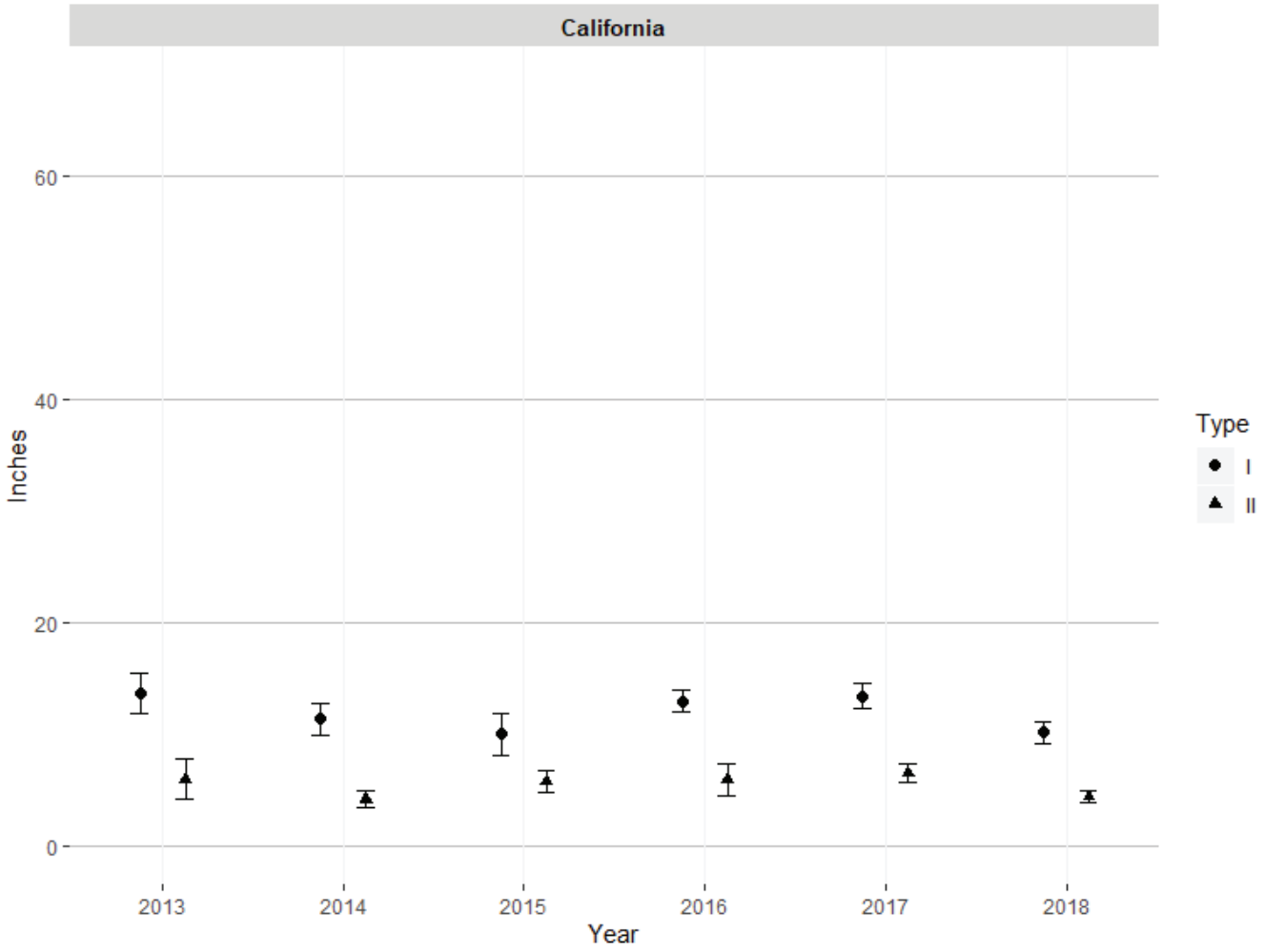

| Proportion of sagebrush that is spreading shaped on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 77% (+12/-12) | 98% (+2/-2) | 53% (+26/-26) | 89% (+7/-7) | 89% (+10/-10) | 100% (+0/-0) |
| | **Type II** | | | | | |
| | 81% (+14/-15) | 100% (+0/-0) | 98% (+2/-3) | 76% (+13/-13) | 95% (+5/-6) | 91% (+7/-7) |

**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.



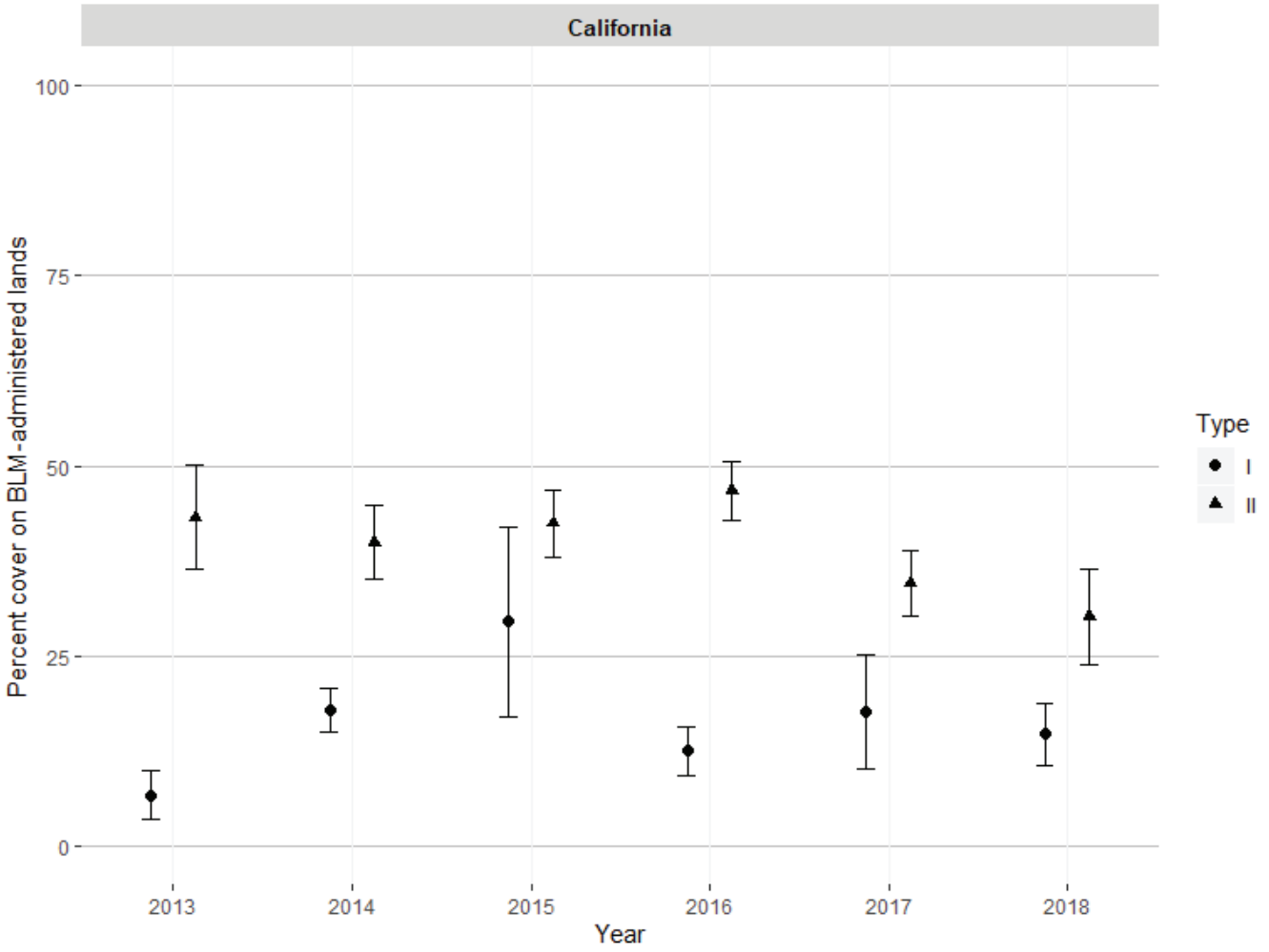

| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 24% (+8/-8) | 16% (+3/-3) | 10% (+5/-5) | 19% (+4/-4) | 22% (+4/-4) | 12% (+4/-4) |
| | **Type II** | | | | | |
| | 8% (+5/-5) | 5% (+2/-2) | 5% (+1/-1) | 6% (+2/-2) | 6% (+1/-1) | 2% (+1/-1) |

**Figure 6.** Mean percent cover of perennial grasses and perennial forbs on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) on BLM California managed lands.



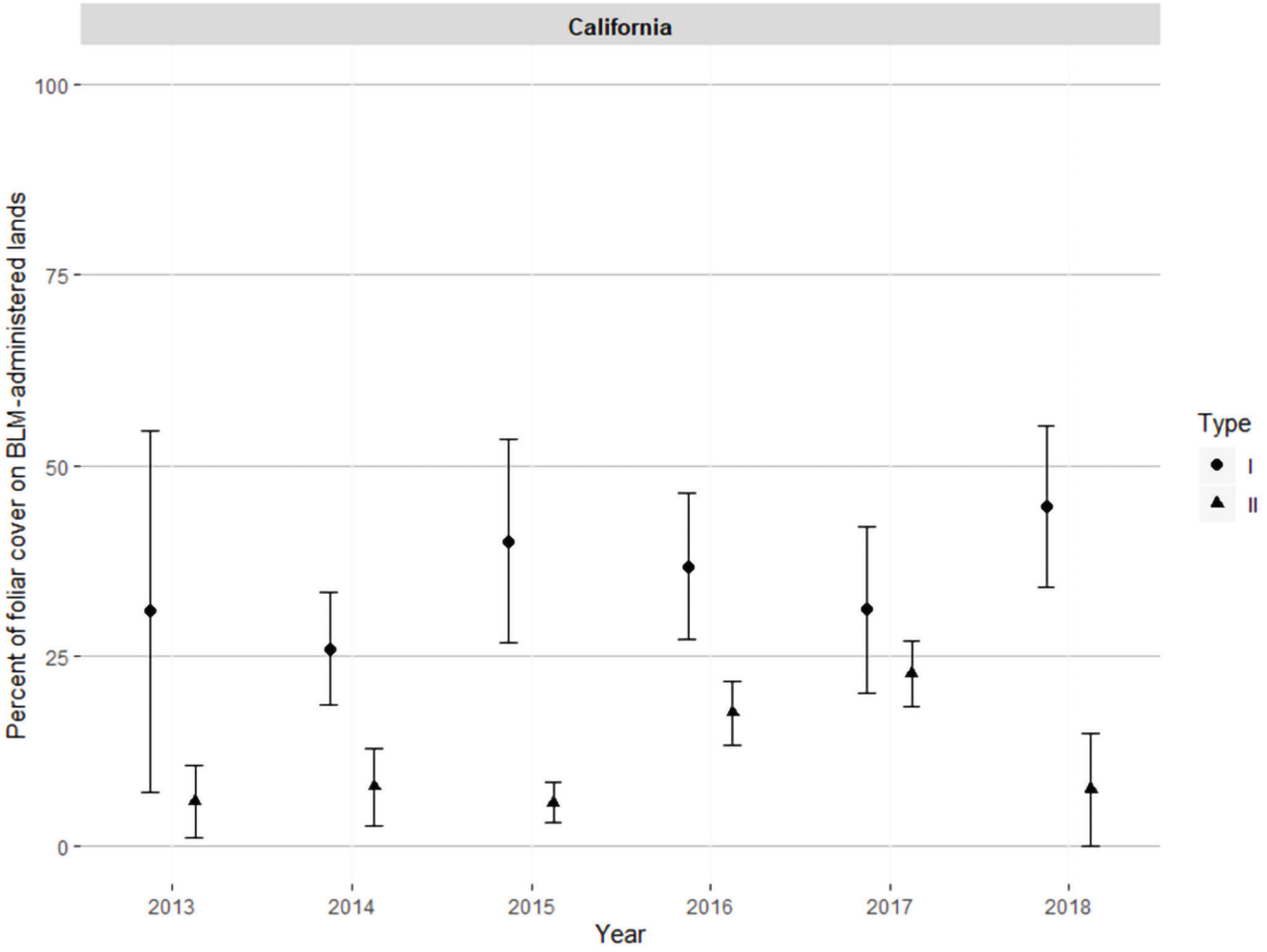

| Mean herbaceous plant species height in inches on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 13.73 (+1.83/-1.83) | 11.45 (+1.4/-1.41) | 10.06 (+1.88/-1.89) | 13.03 (+0.97/-0.96) | 13.48 (+1.09/-1.08) | 10.2 (+0.94/-0.93) |
| | **Type II** | | | | | |
| | 6.04 (+1.79/-1.8) | 4.24 (+0.77/-0.77) | 5.78 (+0.96/-0.97) | 6.03 (+1.4/-1.4) | 6.56 (+0.82/-0.83) | 4.43 (+0.51/-0.51) |

**Figure 7.** Mean herbaceous plant species height in inches on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) on BLM California managed lands.



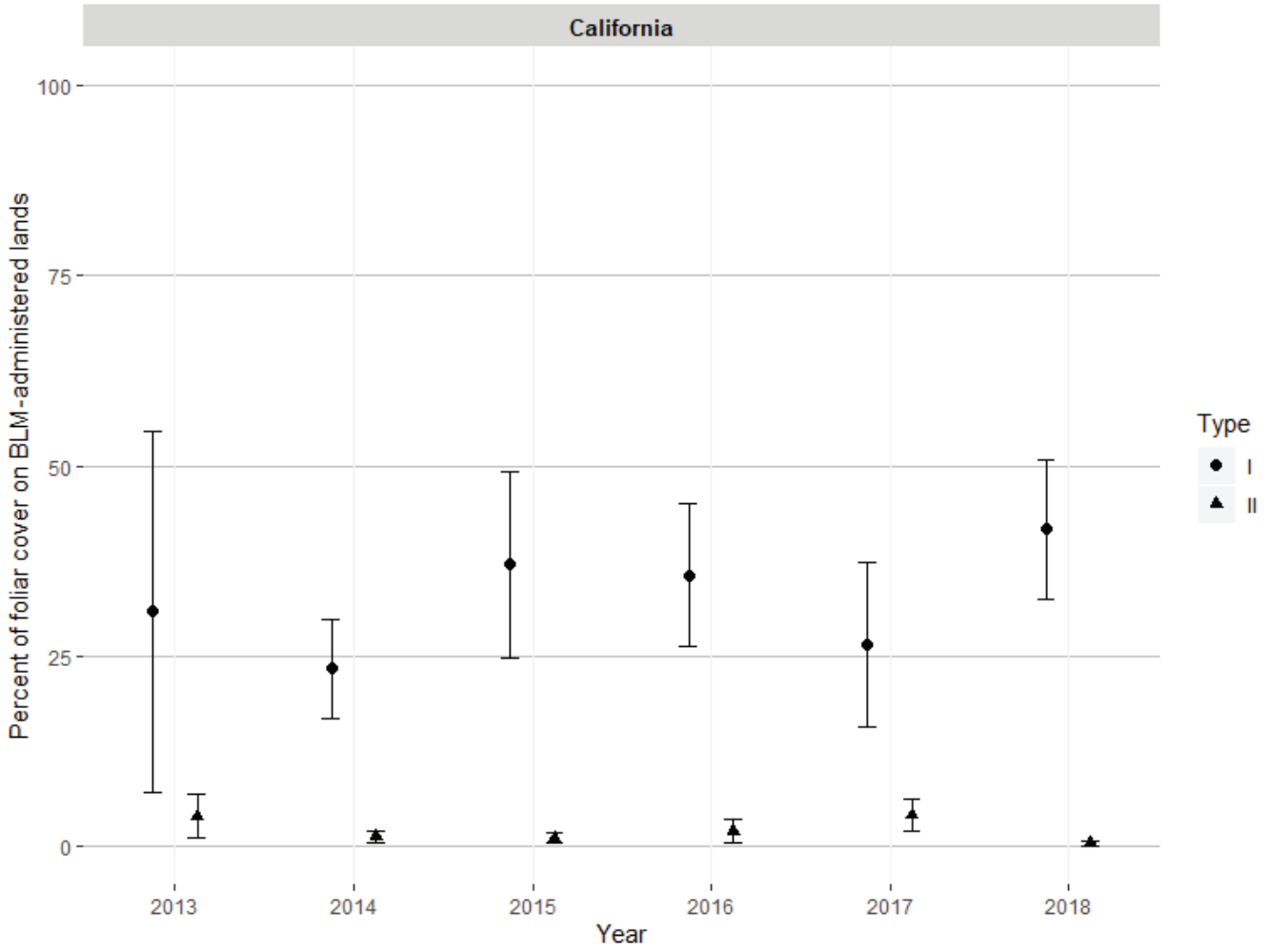

| Percent cover of bare ground on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 7% (+3/-3) | 18% (+3/-3) | 30% (+12/-13) | 13% (+3/-3) | 18% (+8/-8) | 15% (+4/-4) |
| | **Type II** | | | | | |
| | 43% (+7/-7) | 40% (+5/-5) | 42% (+4/-4) | 47% (+4/-4) | 35% (+4/-4) | 30% (+6/-6) |

**Figure 8.** Mean percent cover of bare ground on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) on BLM California managed lands.



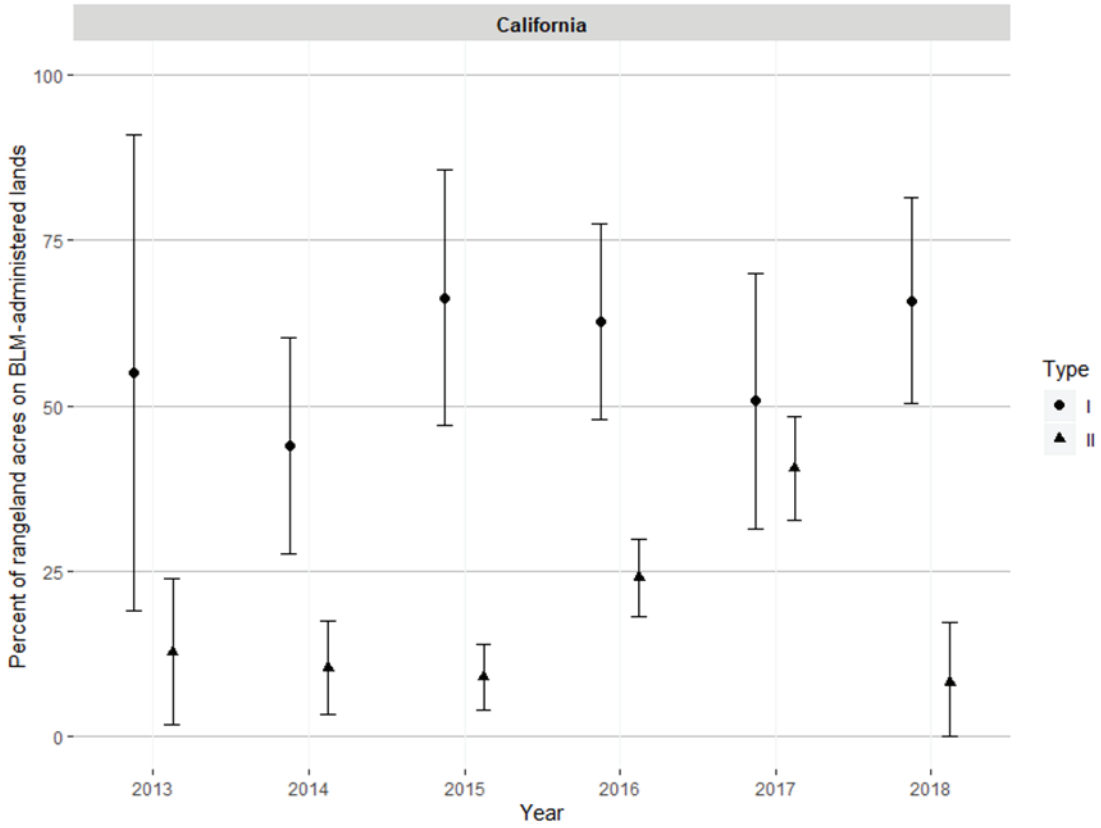

| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 31% (+24/-24) | 26% (+7/-7) | 40% (+13/-13) | 37% (+9/-9) | 31% (+11/-11) | 45% (+11/-11) |
| | **Type II** | | | | | |
| | 4% (+5/-5) | 8% (+5/-5) | 6% (+3/-3) | 18% (+4/-4) | 23% (+4/-4) | 7% (+7/-7) |

**Figure 9.** Proportion of vegetation composed of nonnative invasive species present on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.



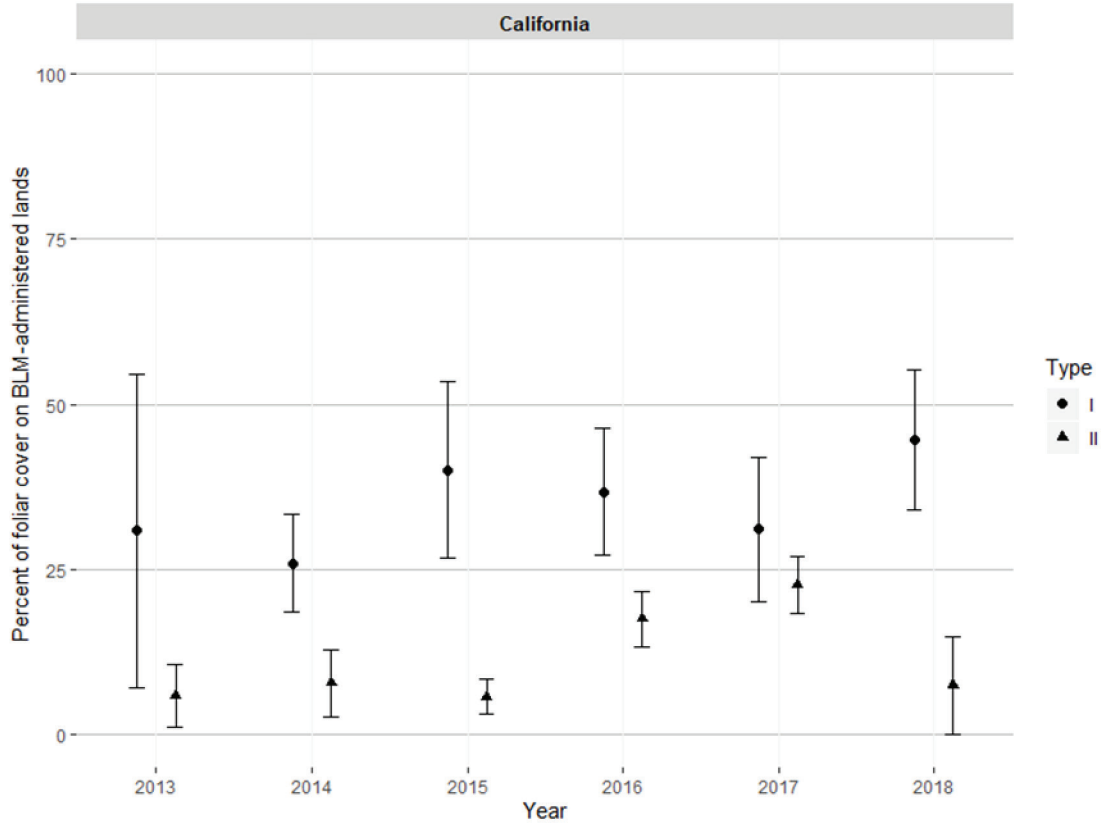

| Proportion of vegetation composed of annual grasses on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 31% (+24/-24) | 23% (+7/-7) | 37% (+12/-12) | 36% (+9/-9) | 27% (+11/-11) | 42% (+9/-9) |
| | **Type II** | | | | | |
| | 4% (+3/-3) | 1% (+1/-1) | 1% (+1/-1) | 2% (+2/-2) | 4% (+2/-2) | 0% (+0/-0) |

**Figure 10.** Proportion of vegetation composed of annual grasses on BLM rangelands (80% confidence interval) on BLM California managed lands.




| Proportion of BLM rangelands where >= 25% of foliar cover is comprised of nonnative invasive species | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 55% (+36/-36) | 44% (+16/-16) | 66% (+19/-19) | 63% (+15/-15) | 51% (+19/-19) | 66% (+16/-16) |
| | **Type II** | | | | | |
| | 13% (+11/-11) | 10% (+7/-7) | 9% (+5/-5) | 24% (+6/-6) | 41% (+8/-8) | 8% (+9/-8) |

**Figure 11.** Proportion of BLM rangelands where nonnative invasive species are abundant (>= 25%) (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.




| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| | **Type I** | | | | | |
| | 31% (+24/-24) | 26% (+7/-7) | 40% (+13/-13) | 37% (+10/-10) | 31% (+11/-11) | 45% (+11/-11) |
| | **Type II** | | | | | |
| | 6% (+5/-5) | 8% (+5/-5) | 6% (+3/-3) | 18% (+4/-4) | 23% (+4/-4) | 7% (+7/-7) |

**Figure 12.** Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) on BLM California managed lands.

## 1.2. Habitat conditions within seasonal habitat areas

### Nesting and Early Brood-Rearing Habitat

Only 20 percent of the plots were meeting sagebrush cover objectives in PHMA and 10 percent in GHMA. However, 58 percent of plots in PHMA and 43 percent of plots in GHMA were meeting perennial grass cover objectives. Perennial grass cover has been documented as an important factor in nest success and early brood-rearing in the Nevada and northeastern California subregion (table 1).

**Table 1.** Nesting and Early Brood-Rearing Habitat Indicators Meeting and Not Meeting Desired Conditions in PHMA and GHMA

| Nesting Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | ≥ 20% | 28 | 20 | 116 | 80 | 0 | 0 | 144 | 100 |
| Perennial Grass Cover | ≥ 10% if total Shrub Cover is < 25% | 63 | 58 | 46 | 42 | 0 | 0 | 109 | 100 |
| Annual Grass Cover | < 5% | 39 | 27 | 105 | 73 | 0 | 0 | 144 | 100 |
| Total Shrub Cover | ≥ 30% | 20 | 14 | 124 | 86 | 0 | 0 | 144 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | ≥ 20% | 6 | 10 | 55 | 90 | 0 | 0 | 61 | 100 |
| Perennial Grass Cover | ≥ 10% if total Shrub Cover is < 25% | 21 | 43 | 28 | 57 | 0 | 0 | 49 | 100 |
| Annual Grass Cover | < 5% | 14 | 23 | 47 | 77 | 0 | 0 | 61 | 100 |
| Total Shrub Cover | ≥ 30% | 6 | 10 | 55 | 90 | 0 | 0 | 61 | 100 |

### Late Brood-Rearing and Summer Habitat

In PHMA and GHMA 46 percent of the plots are meeting sagebrush cover necessary for late-brood rearing. Perennial and forb grass cover were meeting objectives for perennial grasses and forbs on over 60 percent of plots in PHMA and over 50 percent in GHMA (table 2).

**Table 2.** Late Brood-Rearing and Summer Habitat Indicators Meeting and Not Meeting Desired Conditions in PHMA and GHMA

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 10-25% | 148 | 46 | 172 | 54 | 0 | 0 | 320 | 100 |
| Perennial Forb and Grass Cover | > 15% | 196 | 61 | 124 | 39 | 0 | 0 | 320 | 100 |
| Perennial Forb Cover | Arid: ≥ 5% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Mesic: ≥ 15% | 13 | 4 | 307 | 96 | 0 | 0 | 320 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 10-25% | 36 | 46 | 43 | 54 | 0 | 0 | 79 | 100 |
| Perennial Forb and Grass Cover | > 15% | 43 | 54 | 36 | 46 | 0 | 0 | 79 | 100 |
| Perennial Forb Cover | Arid: ≥ 5% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Mesic: ≥ 15% | 5 | 6 | 74 | 94 | 0 | 0 | 79 | 100 |

### Winter Habitat

50 percent of the desired conditions are being met in PHMA and 65 percent in GHMA. (table 3).

**Table 3.** Winter Habitat Indicators Meeting and Not Meeting Desired Conditions in PHMA and GHMA

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Height Above Snow | > 9.8 inch | 314 | 50 | 81 | 13 | 230 | 37 | 625 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Height Above Snow | > 9.8 inch | 111 | 65 | 14 | 8 | 45 | 27 | 170 | 100 |

## 1.3. Habitat trigger summary

One soft habitat trigger was tripped on BLM California managed lands. The BLM is currently working with the State of Nevada, state wildlife agencies, USGS, FWS, permittees, working groups and other partners to develop management actions to reverse the trigger.

**Table 4.** Habitat Triggers Tripped in Population Management Units (PMUs) on BLM California Managed Lands

| Year | Number and Location of Soft Habitat Triggers Tripped | Number and Location of Hard Habitat Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| 2015 | N/A | N/A | N/A |
| 2016 | N/A | N/A | N/A |
| 2017 | N/A | N/A | N/A |
| 2018 | N/A | N/A | N/A |
| 2019 | Soft Trigger-Virginia/Pah Rah Population Management Unit | N/A | Multiple wildfires in 2016-2018 have contributed to habitat declines (~200,000 acres total fire disturbance). |

# 2. Land Health Standards Evaluations

## 2.1. Category A rangelands assessed

**Table 5.** Category A. These rangelands are meeting all standards or making significant progress toward meeting the standards.

| State – Year - Category | BLM Acres in Assessed Allotments |
|---|---|
| CA – 2016 – Category A Rangelands | 6,480 |

## 2.2. Category B rangelands

**Table 6.** Category B. These rangelands are not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (current livestock grazing is a significant factor)

| State – Year - Category | BLM Acres in Assessed Allotments |
|---|---|
| CA – Category B Rangelands | 0 |

**2.3.** BLM staff in California conducted six Land Health Standard Evaluations in allotments that contain GRSG HMAs on BLM California managed lands within the 2015 Nevada and Northeastern California GRSG Plan Amendment planning area.

Six Land Health Standard Evaluations, which included the GRSG portion of the Biodiversity Standard (Wildlife standard) were completed within the planning area. Four of the Land Health Standard Evaluations within the planning area are meeting or making progress toward meeting, the GRSG portion of the Biodiversity Standard.

## 3. Surface Disturbance in PHMA

The BLM California did not authorize surface disturbing activities in PHMA, resulting in zero acres of disturbance and within compliance with the 2015 LUPA disturbance cap.

**Table 7.** Authorizations Permitted in PHMA

| Decision/Program Area | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA |
|---|---|---|
| Coal Leasing | 0 | 0 |
| Fluid Mineral Leasing (O&G) | 0 | 0 |
| Geothermal Energy | 0 | 0 |
| Locatable Minerals | 0 | 0 |
| Nonenergy Leasable Minerals | 0 | 0 |
| Rights-of-Way | 0 | 0 |
| Salable - Mineral Materials Disposals | 0 | 0 |
| Solar Energy | 0 | 0 |
| Trails & Travel Management | 0 | 0 |
| Utility Corridors | 0 | 0 |
| Wind Energy | 0 | 0 |
| Water Facility | 0 | 0 |
| **TOTALS** | **0** | **0** |

# 4. Greater Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

## 4.1. Population trigger summary by year

One population soft trigger was tripped on BLM California managed lands. The BLM is currently working with the State of Nevada, state wildlife agencies, USGS, FWS, permittees, working groups and other partners to develop management actions to reverse the trigger.

**Table 8**. Population Triggers Tripped in Population Management Units (PMUs) on BLM California Managed Lands

| Year | Number and Location of Soft Population Triggers Tripped | Number and Location of Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | N/A | N/A | N/A |
| **2016** | 1-Massacre Population Management Unit | N/A | N/A |
| **2017** | 1-Massacre Population Management Unit | N/A | N/A |
| **2018** | 1-Massacre Population Management Unit | N/A | N/A |
| **2019** | 1-Massacre Population Management Unit | N/A | Possible lack of water causing birds to move to an adjacent lek. Possibly an erroneous trigger. |

# Conclusions

The four LUPA-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data as described above. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of GRSG.

1. Are the plans meeting the GRSG habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the LUPA Habitat Objectives Table by seasonal habitat. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM nor are they achievable on every acre (e.g., due to ecological site potential) of designated GRSG Habitat Management Areas across the landscape that BLM manages. The indicators do, however, provide a suite of habitat characteristics that helps inform BLM when developing and implementing management decisions and projects within GRSG habitat.

   For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. BLM policy directs the field to use the data collected for these habitat indicators as a whole when assessing suitability of GRSG habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) are then used during land health evaluations and NEPA analyses in authorization processes.

   The Habitat Objectives Table in the 2015 LUPA describes overall desired conditions through a set of indicators and associated benchmarks for GRSG seasonal habitats within the planning area.

   ***Nesting and Early Brood-Rearing***
   The indicators for nesting and early brood-rearing include sagebrush cover, perennial and annual grass cover, and total shrub cover. Monitoring data in PHMA shows that 80 percent of plots are not meeting desired conditions for shrub cover of 20 percent or higher. The majority of plots were also not meeting desired conditions for annual grass and total shrub cover. Although these indicators are not meeting desired conditions, it does not necessarily make these plots unsuitable. With over 58 percent of sites meeting desired conditions for perennial grass, an important component on BLM California managed lands for successful nesting and cover, these plots could be suitable for nesting and early brood-rearing. Results in GHMA are similar to those in PHMA.

   ***Late Brood-Rearing and Summer Habitat***
   Indicators for late brood-rearing and summer habitat include sagebrush cover, perennial and grass cover, and perennial forb cover (arid and mesic sites). Nearly half of the plots are meeting the desired condition for sagebrush cover (10-25%) and perennial forb and grass cover (>15%) in both PHMA and GHMA. However, over 90 percent of plots in PHMA and GHMA are not meeting perennial forb cover on mesic sites. Since on single indicator does not determine suitability, these sites may provide late brood-rearing and summer habitat for GRSG.

***Winter Habitat***

Winter habitat indicators include sagebrush cover and sagebrush height above annual snow fall. Sagebrush cover is not meeting desired conditions on 80-90 percent of plots in PHMA and GHMA. Sagebrush height above annual snow is meeting desired conditions on approximately 50-65 percent of sites in PHMA and GHMA. This indicator will be variable dependent on yearly average snow falls and is being based on a model versus on the ground data collection.

***Seasonal Habitat Discussion***

Summaries of 11 indicators relevant to GRSG habitat were derived from BLM Landscape Monitoring Framework (LMF) data collected between 2013 and 2018 within and outside GRSG habitat. These summaries are weighted estimates representing the area sampled. General trends can be determined from these summaries. Sagebrush cover within type I and II decreased between 2013 and 2018. While sagebrush height decreased in type I and increased in type II. Columnar shaped sagebrush declined from 2013 to 2018 in both type I and II and spreading sagebrush plants increased in type I and II. Perennial grasses and forbs decreased from 2013-2018. Height of herbaceous plants in GRSG habitat type I and II decreased slightly. The percent of bare ground increased in type I and decreased in type II. The proportion of vegetation composed of nonnative invasive species was static 2013 to 2018 in both types. Annual grasses increased in type I and decreased in type II.

The 2015 Nevada and Northeastern California LUPA included objectives for the percent of the area that would meet the vegetation characteristics and for each of the seasonal use areas. The summary of data included in the report is a plot summary and does not include an estimate of the amount of seasonal habitat that meets the desired conditions for vegetative and habitat characteristics. This can be done when the data is evaluated with an interdisciplinary team following the process outlined in the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance. Site scale assessments evaluate the indicators collectively to determine suitability of seasonal habitat condition across biologically relevant areas, where possible.

Evaluating the proportion of the seasonal habitat meeting or making progress towards meeting the desired conditions can be accomplished via site-scale habitat assessments. Each monitoring plot is rated as suitable, marginal, or unsuitable based on the interpretation of this suite of habitat indicators as a whole. Estimates of the proportion of the seasonal habitat across a biologically relevant area that is in each suitability class can then be made if monitoring efforts stemmed from a probabilistic sample design. In locations where these estimates are not possible, the Interdisciplinary Team can use the suitability ratings to draw conclusions about overall seasonal habitat conditions. Evaluating how much of a seasonal habitat is meeting or not meeting each of the indicators individually is most appropriate when investigating the cause for unsuitable and/or marginal site-scale habitat ratings and developing management actions to address them.

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/or are not a manageable component of the plant community. In some cases, past management history, drought, etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping contains nonhabitat inclusions, therefore some monitoring plots within either seasonal habitats or habitat management areas may fall on these inclusions of nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results from the data for each habitat objectives do not represent the landscape as a whole. Rather, the results are solely based on the percentage of monitoring plots across the HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential.

Interpretation of the data is beyond the scope of this monitoring summary report. A mosaic of vegetation communities and ecological sites occurs across the range of GRSG, and spatial data used to delineate habitats (seasonal and/or HMAs) cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs.

2. Are GRSG HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/Wildlife habitat standard?

   Of the six of allotments that contain GRSG habitat with completed Land Health Standard evaluations since 2015, four are meeting the land health standards and two are making progress towards meeting the standards. HAF site-scale evaluations were conducted for the six allotments and the information was included in the Biodiversity (wildlife) standard.

3. Is the plan meeting the disturbance objective(s) within GRSG HMAs?
   The monitoring and disturbance data presented in the results section of this report indicates that BLM California did not authorize disturbance in PHMA from 2015-2019 and the amount of disturbance within the planning area has remained well below the 3 percent disturbance cap at the project level and BSU scales as described in the LUPA.

4. Are the GRSG populations within this plan boundary and within the GRSG HMAs increasing, stable, or declining?

   The data presented in the results section indicate that since 2015, no hard triggers were tripped for habitat or populations. One habitat and one population soft trigger was tripped since the plans were signed in 2015 indicating.

   On BLM managed lands in northeastern California there has been a steady decline in GRSG populations from 2016 through 2019. Northern California populations have declined over 50 percent (per. Communication CDFW 2020).

   In northwestern Nevada, GRSG lek attendance at trend leks declined by 24 percent from 2018 to 2019. Aside from declining lek attendance, elevated mortality rates for radio-marked GRSG in the northern portion of the Sheldon National Wildlife Refuge were detected during the fall of 2018 and early winter of 2019 which likely contributed to declining lek trends observed in the spring of 2019 (per. Communication NDOW 3-13-2020).

In conclusion, this BLM California GRSG 5-Year Monitoring Report provides results of implementation monitoring of the 2015 land use plan decisions rather than assessing effectiveness of the conservation measures in the plan. This summary of the monitoring data should be considered a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for GRSG.

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# Greater Sage-Grouse Plan Implementation

## Appendix 8: Colorado State Office Monitoring Report for the 2015 Northwest Colorado Land Use Plan Amendment

2015–2020

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# Appendix 8: Colorado State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 8: Colorado State Office Monitoring Report for the 2015 Northwest Colorado Land Use Plan Amendment

## 2015–2020


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# Introduction

This BLM Colorado State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Monitoring Report). This appendix describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures from the Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) covered by the 2015 Rocky Mountain Region GRSG Record of Decision (ROD). The BLM Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 strategy-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework, evaluating the BLM's GRSG National Planning Strategy (5 questions), and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the Northwest Colorado Greater Sage-Grouse ARMPA and answers the following four questions:

1. Are the land use plan areas meeting the sage-grouse habitat objectives?
2. Are sage-grouse Habitat Management Areas (HMAs) within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the special status species/wildlife habitat standard?
3. Is the plan area meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

BLM Colorado monitored four factors (one factor per monitoring question) in LUP-designated sage-grouse habitat management areas within the Northwest Colorado Subregional planning area:

- Habitat conditions, as described in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)
- Land Health Standards evaluations
- Surface disturbance in Priority Habitat Management Area (PHMA)
- Sage-grouse population trends (in coordination with the state wildlife agency)

Note that the following methods apply to this specific BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the Biologically Significant Unit (BSU) scale. The results in this report reference Colorado Management Zones (MZs) and BSUs as identified in the LUP for this planning area (BLM 2015). In Colorado, the BSUs broadly represent individual GRSG populations and each BSU may include one or more Colorado MZ (see table 20 in results section).

In November 2019, the HMA boundaries, within the planning area, were modified through a plan maintenance action, to adopt newly mapped habitat boundaries provided by Colorado Parks and Wildlife (CPW). The changes to these mapped habitat boundaries represent an update to the HMAs analyzed in the September 2015

GRSG ARMPA (see ePlanning for details: **Habitat Boundary Adjustments**). Results in this document are reported using the current 2019 HMAs.

BLM Colorado used the following methods for the four factors.

# 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

## 1.1. Habitat conditions statewide

The BLM National Operations Center (NOC) provided summaries of 11 indicators of importance to sage-grouse rangewide generated within Greater Sage-Grouse habitat (type I) and outside of Greater Sage-Grouse habitat (type II) on BLM lands in Colorado. These indicators are generally recognized as important components of Greater Sage-Grouse Habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Table. These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the national report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 — **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Habitat conditions within seasonal habitats

The summaries below, compiled by BLM Colorado, reflect data collected within 2019 sage-grouse HMAs in the Northwest Colorado Greater Sage-Grouse ARMPA between July 11, 2011, and September 18, 2019. The summaries count and categorize monitoring locations as meeting, not meeting, or data not collected, for each of the quantifiable indicators found in the Habitat Objectives Table of the Northwest Colorado Greater Sage-Grouse ARMPA. The indicator values shown in the Habitat Objectives Table (table 2-2 on p. 2-4 and 2-5 of the ARMPA) describe the desired conditions, across the broad landscape, based on best available science at the time of publication of the Northwest Colorado Greater Sage-Grouse ARMPA regarding GRSG habitat use. Indicators were assessed for each seasonal habitat description in table 2-2 of the ARMPA, for AIM data collections. Per initial agreement with CPW only data collected within seasonal habitat boundaries, as delineated by CPW GRSG overall range were assessed. Additionally, for breeding and summer seasons, only AIM data collected within the defined date ranges was assessed; all data was considered for winter season. Within seasonal habitat boundaries, analysis was further subdivided by HMA type. Data collected prior to 2016 was solely within the White River Field Office, which could bias final results. Additionally, plot data collected to monitor emergency restoration and stabilization efforts (ESR), and plot data collected within fire perimeters prior to wildfire are not included in this summary (6 ESR, 3 wildfire). Plots with null indicator values were interpreted to mean there was not enough of that component to measure, and thus that indicator was determined to be not meeting.

Collectively, the vegetation indicators for sagebrush (cover, height, and shape), perennial grasses, perennial forbs (cover, height, and/or availability), and others found in the Habitat Objectives Table represent the vegetation components associated with each seasonal habitat type. Not all locations within

a given seasonal habitat area will be able to achieve the indicator values in the Habitat Objectives Table due to the inherent variation in vegetation communities and ecological site potential as well as environmental factors such as drought or fire. Monitoring locations where one or more objectives are not met may or may not be providing suitable sage-grouse seasonal habitat; these summaries do not include an interpretation of the site-scale metrics which collectively inform habitat suitability. Habitat suitability is appropriately evaluated through the processes outlined in the Sage-Grouse Habitat Assessment Framework and supplemental training materials developed by the BLM. These include guidance on the interpretation of these data (i.e., indicator values) and other information collected within GRSG habitat. Finally, the data aggregated for this summary represent many different sample designs with various sample intensities and monitoring objectives; thus, they may not reliably represent conditions in all locations.

## 1.3. Habitat conditions for adaptive management habitat triggers

GRSG in Colorado occur in six distinct populations. However, because the Northwest Colorado and North Park populations account for roughly 88 percent of the total males in Colorado, these are the areas thresholds have been established for as per the ARMPA. For a hard trigger to be tripped the following thresholds must be breached simultaneously:

- Male lek count (compared to 3-year running average) falls below 1,575 males in Northwest Colorado
- Male lek count (compared to 3-year running average) falls below 670 males in North Park
- A 30 percent cumulative loss of PHMA, measured independently, in both the Northwest Colorado and North Park BSUs (baseline from 2015)

The Northwest Colorado Sage-Grouse Statewide (SIT) Implementation Team meets annually to determine whether soft or hard habitat triggers have been tripped for each Colorado MZ. To assess the male lek count threshold for the hard trigger, CPW provides male lek count assessments compared to the 3-year running average for Norwest Colorado and North Park BSUs. These graphs (further discussed in results section 4 of this report) are evaluated by the SIT to determine if lek count trends are dropping to a level where a hard trigger has been tripped. In addition, male lek counts for all Colorado MZs are evaluated against the 3-year running average for all Colorado MZs to determine if lek trends are reaching a level of concern that would trip a soft trigger. To determine whether 30 percent of cumulative habitat loss of PHMA has occurred the SIT looks at several factors, including sagebrush availability, habitat degradation including disturbances such as energy development, and other impacts such as wildfire and agriculture. As discussed in section D.2.2.1 of the Monitoring Framework, changes to the existing sagebrush cover overtime are calculated using the Biophysical Setting (BpS) and the Existing Vegetation Type (EVT) as classified in LANDFIRE 1.2.0.

The Colorado GRSG ARMPA does not define specific thresholds, nor does it outline methodology for determining if soft triggers have been tripped. However, the soft triggers represent an intermediate threshold indicating that changes are needed to address habitat or population losses. Therefore, soft triggers could include an intermediate level of habitat disturbance when compared to the hard trigger habitat loss indicator. As such, the SIT considers the male lek count trends coupled with the density and disturbance caps outlined in the ARMPA for each Colorado MZ. The disturbance cap limits surface disturbance to 3 percent across PHMA within a Colorado MZ and at the BSU scale. The density cap sets a maximum of 1 disruptive facility per 640 acres (average) within the same areas. The disturbance cap, density cap, and existing sagebrush cover in conjunction with population trends are evaluated by the SIT to determine whether a soft trigger has been tripped.

## 2. Land Health Standards (LHS) Evaluations

The NOC summarized LHS data for allotments that contain any sage-grouse habitat in the planning area. This data is summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in two categories:

### 2.1. BLM acres of Category A allotments that contain GRSG habitat

All LHS are achieved or significant progress toward achieving is being made.

### 2.2. BLM acres of Category B allotments that contain GRSG habitat

These are not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress toward achieving LHS.

## 3. Surface Disturbance in PHMA

The methods used to track the number of BLM-authorized surface disturbing actions in GRSG PHMA within the planning area and to calculate the amount of disturbance associated with each proposal prior to authorization are:

Disturbance authorizations from 2015 through 2019 were tracked using the 2019 HMAs and a combination of tools. Firstly, field office specialists provide a supplemental Implementation Plan Conformance Request form to the Colorado State Office Sage-Grouse Team. This supplemental form provides information on any surface disturbance projects occurring within PHMA. Additionally, tracking of projects through ePlanning allows BLM Colorado to compile all completed authorizations within PHMA. Close coordination between field offices and the Colorado State Office ensures that projects resulting in disturbance are being captured and accounted for during the planning phase. These disturbance authorizations are then combined and tracked using Surface Disturbance and Reclamation Tracking Tool (SDARTT).

All existing disturbance and density cap calculations are updated regularly using SDARTT and provide an inventory of existing disturbances within PHMA for all Colorado MZs and corresponding BSUs. The percentage of disturbed land within a BSU and Colorado MZ is calculated using an inventory of anthropogenic disturbances, such as energy and infrastructure, outlined in table E-1 (p. E-4, GRSG ARMPA) and dividing the total disturbance acres by the total acres of PHMA within that MZ or BSU. These disturbances account for all past and present surface disturbances regardless of the year they were authorized (i.e., disturbances prior to the 2015 LUP are included in the calculations). The density cap is calculated as a finer subset of the same disturbance inventory. Density is calculated by evaluating whether energy related disturbances, such as oil and gas well pads, have existing infrastructure on developed pads. The number of these locations are then totaled and divided by the acres of PHMA in a BSU and the Colorado MZ, and then divided by 640 acres to obtain the average number of disruptive facilities per 640 acres (p. E-2, GRSG ARMPA). The disturbance and density calculations presented for the BSUs and Colorado MZs have been updated as of June 2020 and were calculated using the newly adopted 2019 HMA boundaries.

Note that the methods previously described apply at the project (Colorado MZ) and BSU scale and both were updated to reflect the newly adopted 2019 PHMA boundary. The National GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework and were also calculated using the 20119 PHMA.

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following LUP-defined methodology:

Population triggers are calculated and evaluated in coordination with CPW using lek count data. Male lek counts and the corresponding data are collected, analyzed, and provided by CPW on an annual basis. The lek count threshold is determined from the 25 percent quartile of the high male count in each of the Northwest Colorado and North Park populations over the period of years for which consistent lek counts are available. The 25 percent quartiles were determined using the annual high male counts rather than the 3-year running average to ensure that normal variation in lek counts is above the threshold.

As mentioned in methods section 1.3 above, the hard trigger for Northwest Colorado is 1,575 males and for North Park is 670 males. This lek count threshold is compared to the 3-year running average of the high male lek count. The 3-year running average value is used because it is considered to be more indicative of the population trend than annual high male counts. The 3-year running average is one of the main factors used to evaluate soft and hard triggers across all Colorado MZs. Although thresholds for hard and soft triggers have not been established for every Colorado MZ, these population trends are closely monitored by CPW, and population trends are evaluated to determine whether any declines in the population warrant further discussion and evaluation in coordination with BLM.

# Results

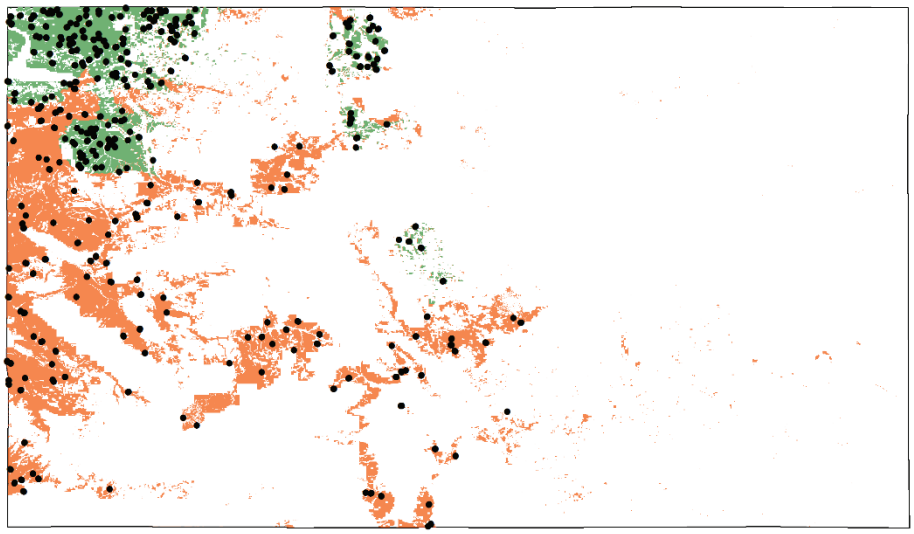
This section describes the results of implementation and monitoring of GRSG land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance in PHMA and sage-grouse population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses

#### 1.1.1. Map of Plot Locations Used to Derive Statewide Estimates

For these results, GRSG habitat is not equivalent to HMAs and was delineated in 2012 to facilitate sample design intensification for LMF. A small percentage of type I sample locations are outside of the current 2019 HMAs.




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | CO | 46 | 1,908,705 |
| 2013 | II | CO | 17 | 3,175,901 |
| 2014 | I | CO | 86 | 1,980,243 |
| 2014 | II | CO | 40 | 5,409,943 |
| 2015 | I | CO | 48 | 1,985,636 |
| 2015 | II | CO | 40 | 5,484,534 |
| 2016 | I | CO | 98 | 2,106,446 |
| 2016 | II | CO | 52 | 5,754,591 |
| 2017 | I | CO | 49 | 2,055,170 |
| 2017 | II | CO | 35 | 5,389,213 |
| 2018 | I | CO | 54 | 2,000,060 |
| 2018 | II | CO | 40 | 5,398,506 |

**Figure 1.** Map of LMF plot locations in Colorado.

**1.1.2.** LMF indicator estimates for type I (within GRSG habitat) and type II (outside GRSG habitat) are shown in the 11 figures below. Each figure includes the 80% confidence interval as indicated by the bars. These same indictor estimates are also provided in section 1.1.3 (below) as corresponding tables.

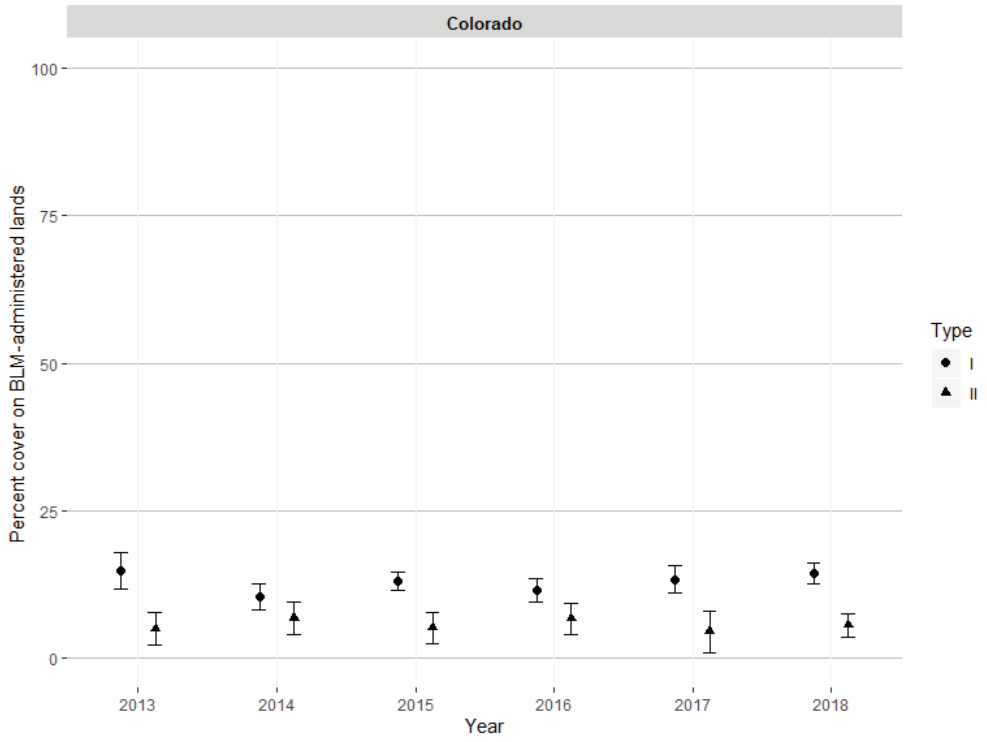



**Figure 2.** Percent cover of sagebrush on BLM rangelands.

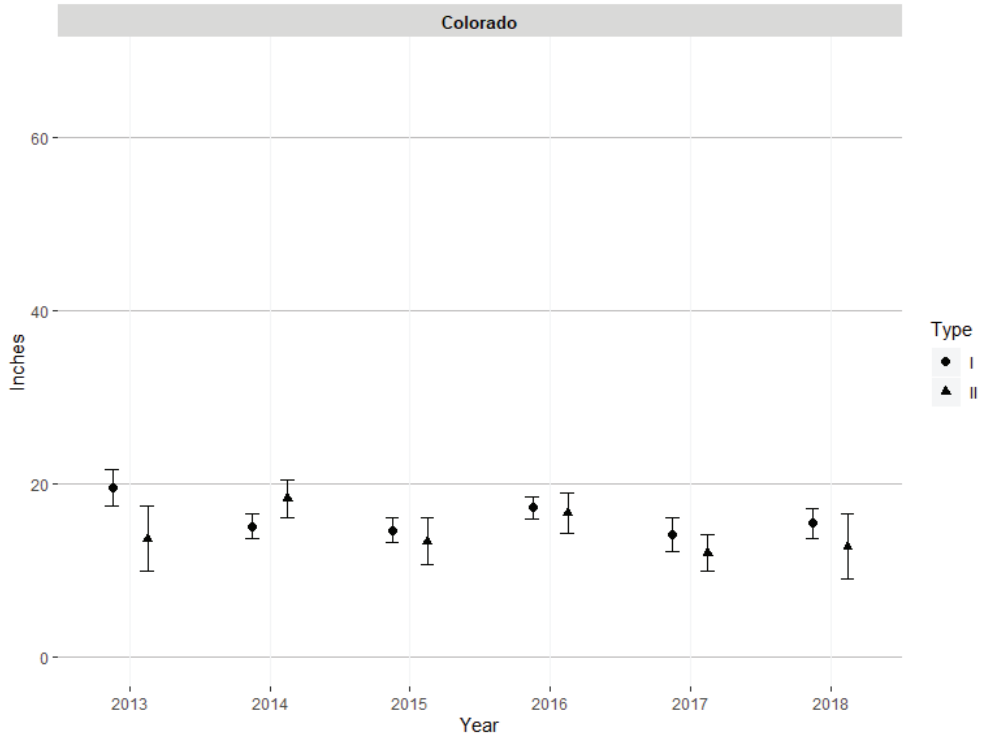



**Figure 3.** Mean sagebrush species height in inches on BLM rangelands.

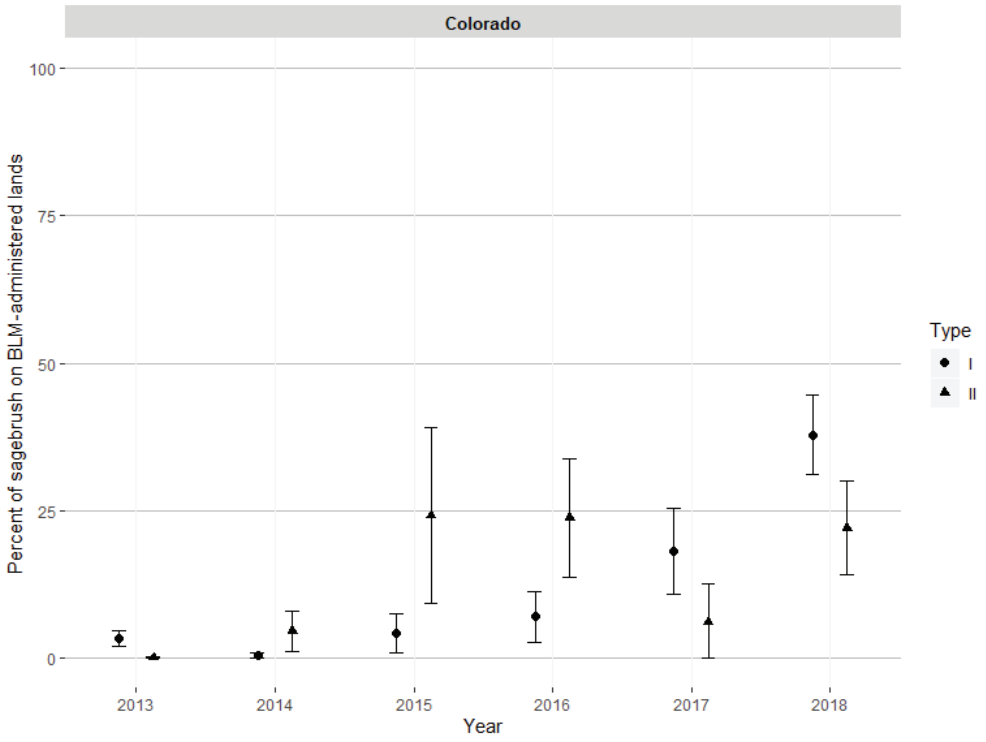



**Figure 4.** Proportion of sagebrush that is columnar shaped on BLM rangelands.

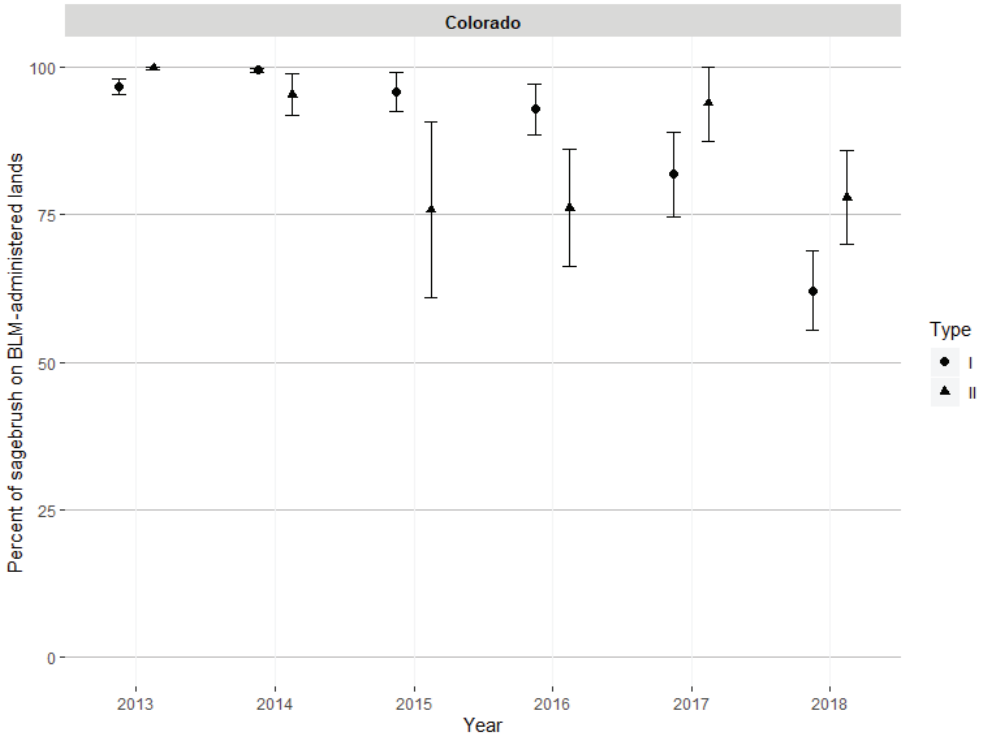



**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM.

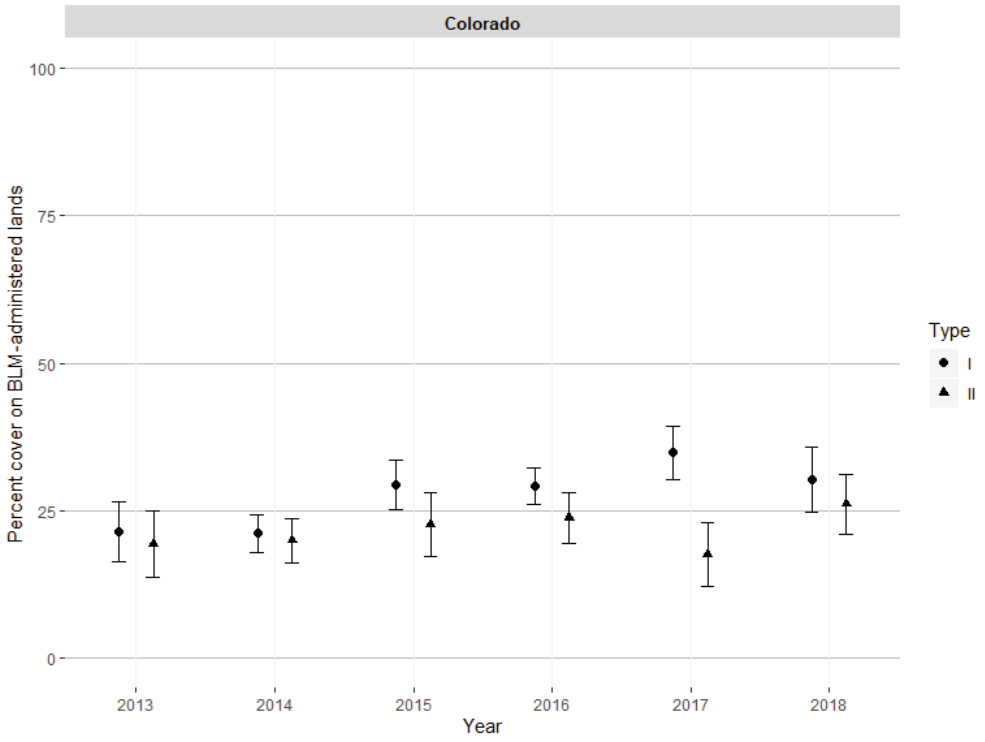



**Figure 6.** Percent cover of perennial grasses and perennial forbs.

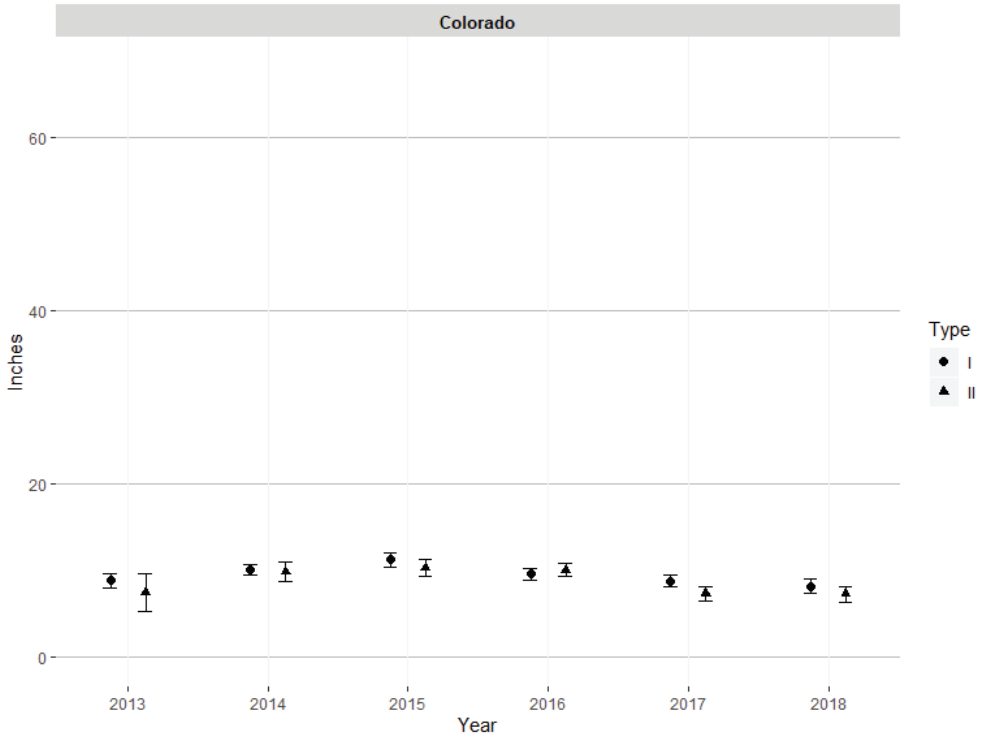



**Figure 7.** Mean herbaceous plant species height in inches on BLM.

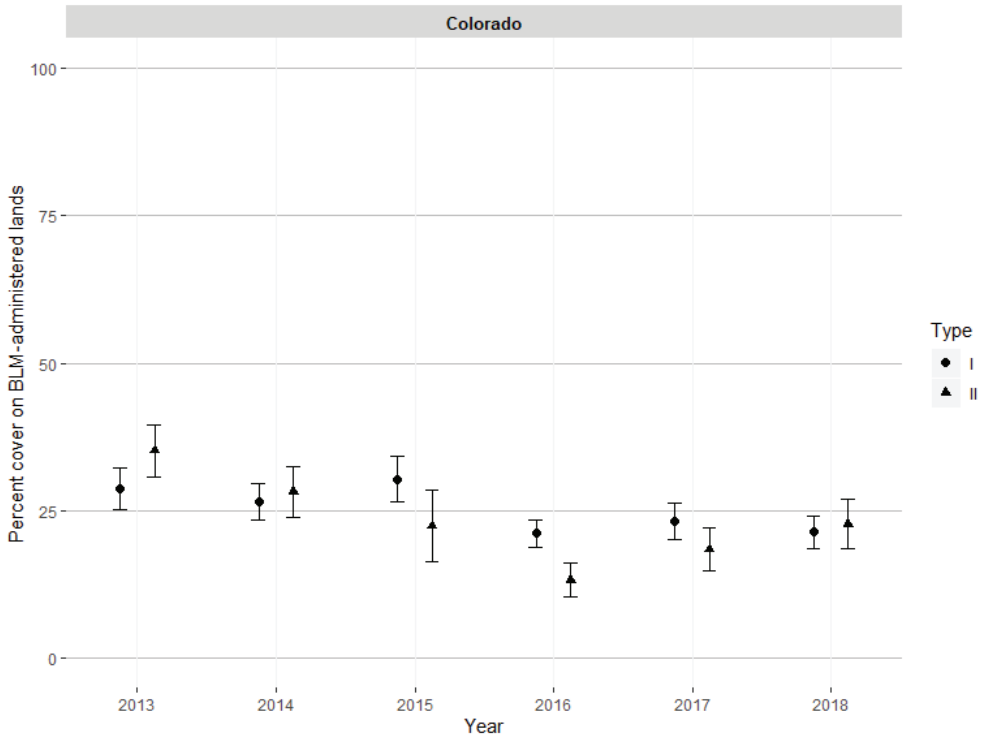



**Figure 8.** Percent cover of bare ground on BLM rangelands.

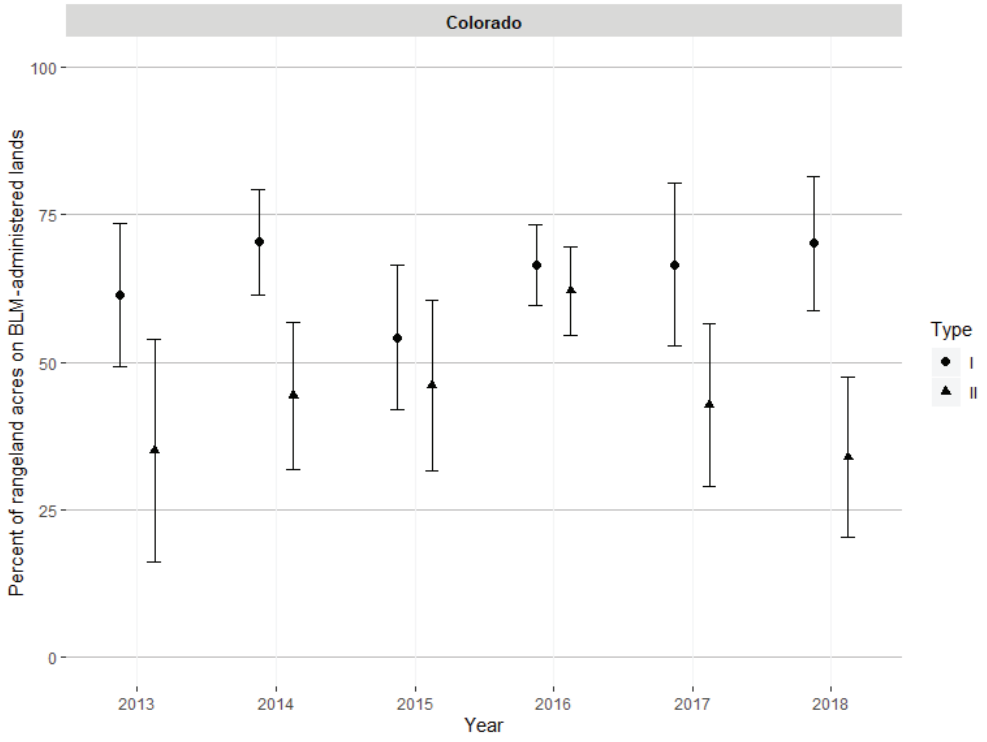



**Figure 9.** Proportion of BLM rangelands with nonnative invasive species present.

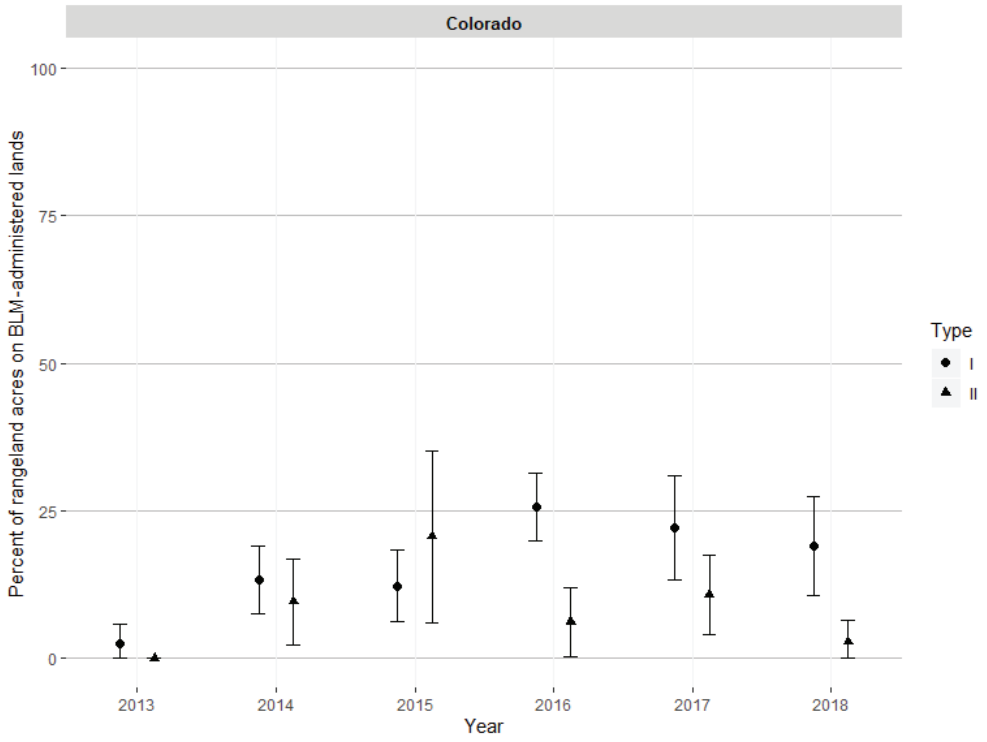



**Figure 10.** Proportion of BLM rangelands where >= 25% of foliar cover is comprised of nonnative invasive species.

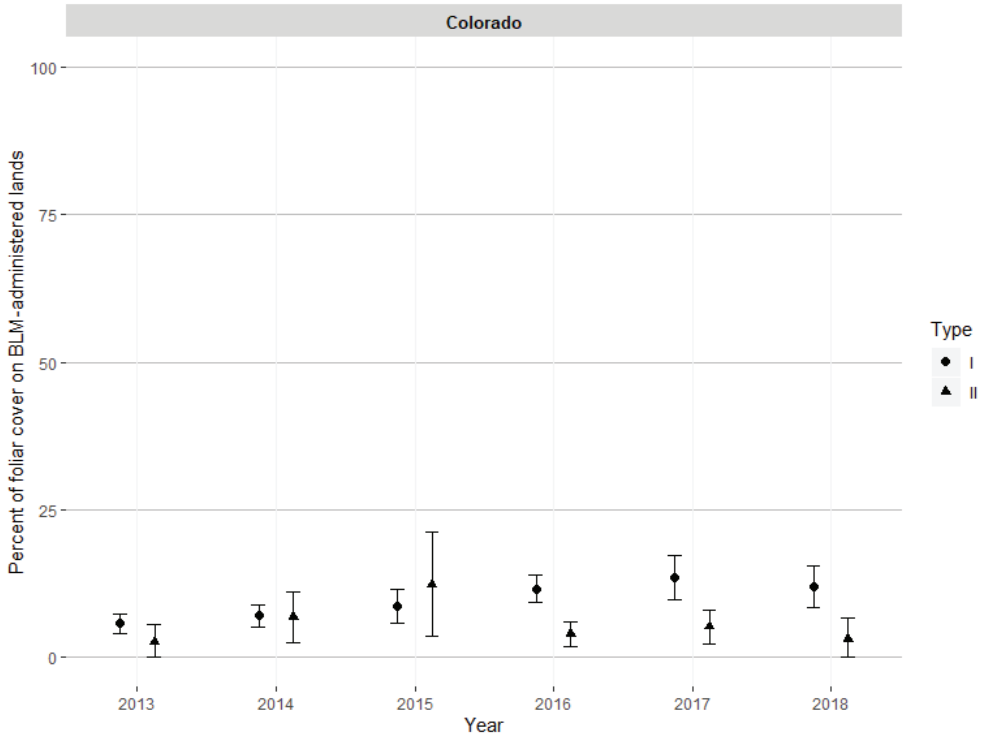



**Figure 11.** Proportion of vegetation composed of annual grasses on BLM rangelands.

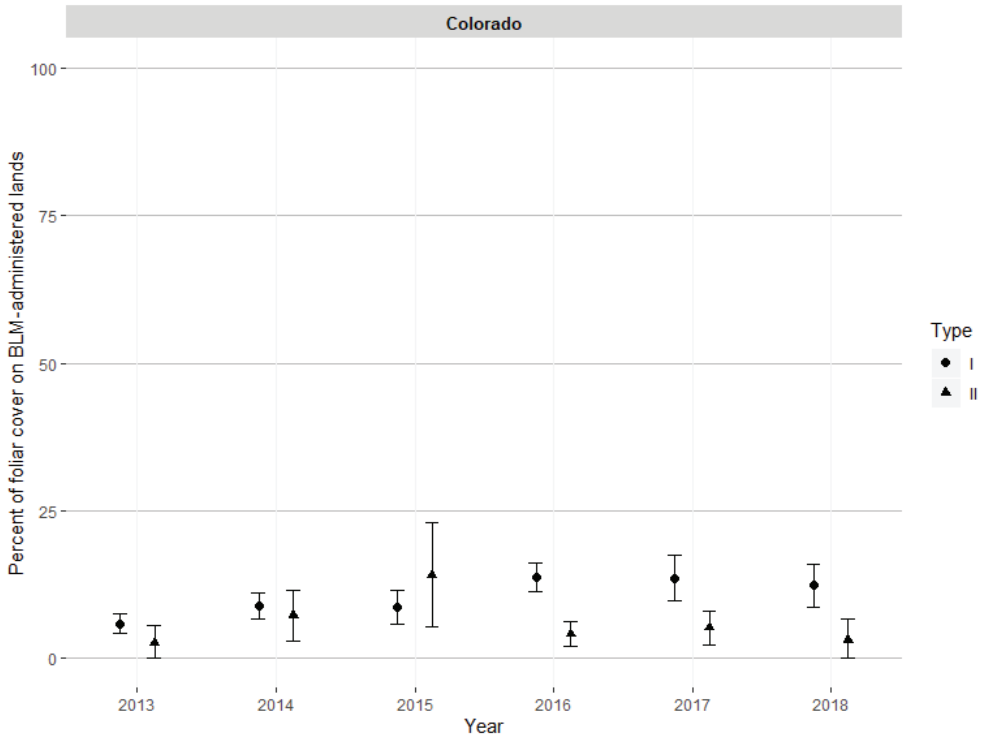



**Figure 12.** Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands.

**1.1.3.** LMF indicator estimates for type I (within GRSG habitat) and type II (outside GRSG habitat) are shown in the 11 tables below. Each table includes the 80% confidence interval (CI) as indicated by the (+/-). These same indictor estimates are also provided in results section 1.1.2 (above) as corresponding figures.

**Table 1.** Percent Cover of Sagebrush on BLM Rangelands

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80 CI) | Sample Size | Value (+/- 80 CI) | Sample Size |
| 2013 | 15% (+3/-3) | 46 | 5% (+3/-3) | 17 |
| 2014 | 10% (+2/-2) | 86 | 7% (+3/-3) | 40 |
| 2015 | 13% (+2/-2) | 48 | 5% (+3/-3) | 40 |
| 2016 | 12% (+2/-2) | 98 | 7% (+3/-3) | 52 |
| 2017 | 13% (+2/-2) | 49 | 5% (+4/-4) | 35 |
| 2018 | 14% (+2/-2) | 54 | 6% (+2/-2) | 40 |

**Table 2.** Mean Sagebrush Species Height in Inches on BLM Rangelands

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (inches) (+/- 80% CI) | Sample Size | Value (inches) (+/- 80% CI) | Sample Size |
| 2013 | 19.6 (+2.05/-2.05) | 46 | 13.72 (+3.73/-3.74) | 17 |
| 2014 | 15.13 (+1.4/1.39) | 86 | 18.35 (+2.17/-2.17) | 40 |
| 2015 | 14.70 (+1.48/-1.49) | 48 | 13.39 (+2.72/-2.71) | 40 |
| 2016 | 17.28 (+1.3/-1.29) | 98 | 16.72 (+2.35/-2.35) | 52 |
| 2017 | 14.17 (+1.93/-1.93) | 49 | 12.03 (+2.09/-2.09 | 35 |
| 2018 | 15.49 (+1.72/-1.73) | 54 | 12.81 (+3.71/-3.70) | 40 |

**Table 3.** Proportion of Sagebrush that is Columnar Shaped on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| 2013 | 3% (+/-1) | 46 | 0% (+0/-0) | 17 |
| 2014 | 0% (+0/-0) | 86 | 5% (+4/-4) | 40 |
| 2015 | 4% (+3/-3) | 48 | 24% (+15/-15) | 40 |
| 2016 | 7% (+4/-4) | 98 | 24% (+10/-10) | 52 |
| 2017 | 18% (+6/-6) | 49 | 6% (+6/-6) | 35 |
| 2018 | 38% (+7/-7) | 54 | 22% (+8/-8) | 40 |

**Table 4.** Proportion of Sagebrush that is Spreading Shaped on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80 CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 97% (+1/-1) | 46 | 100% (+0/-0) | 17 |
| **2014** | 100% (+0/-0) | 86 | 95% (+4/-4) | 40 |
| **2015** | 96% (+3/-3) | 48 | 76% (+15/-15) | 40 |
| **2016** | 93% (+4/-4) | 98 | 76% (+10/-10) | 52 |
| **2017** | 82% (+7/-7) | 49 | 94% (+6/-6) | 35 |
| **2018** | 62% (+7/-7) | 54 | 78% (+8/-8) | 40 |

**Table 5.** Percent Cover of Perennial Grasses and Perennial Forbs on BLM Rangelands

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 21% (+5/-5) | 46 | 19% (+6/-6) | 17 |
| **2014** | 21% (+3/-3) | 86 | 20% (+4/-4) | 40 |
| **2015** | 29% (+4/-4) | 48 | 23% (+5/-5) | 40 |
| **2016** | 29% (+3/-3) | 98 | 24% (+4/-4) | 52 |
| **2017** | 35% (+4/-4) | 49 | 18% (+5/-5%) | 35 |
| **2018** | 30% (+6/-6) | 54 | 26% (+5/-5%) | 40 |

**Table 6.** Mean Herbaceous Plant Species Height in Inches on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (inches) (+/- 80% CI) | Sample Size | Value (inches) (+/- 80% CI) | Sample Size |
| **2013** | 8.87 (+0.8/-0.8) | 46 | 7.47 (+2.14/-2/14) | 17 |
| **2014** | 10.13 (+0.66/-0.65) | 86 | 9.85 (+1.11/-1.12) | 40 |
| **2015** | 11.29 (+0.86/-0.85) | 48 | 10.31 (+0.98/-0.97) | 40 |
| **2016** | 9.62 (+0.68/-0.68) | 98 | 10.12 (+0.81/-0.82) | 52 |
| **2017** | 8.83 (+0.62/-0.62) | 49 | 7.38 (+0.86/-0.85) | 35 |
| **2018** | 8.24 (+0.88/-0.87) | 54 | 7.32 (+0.9/-0.9) | 40 |

**Table 7.** Percent Cover of Bare Ground on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 29% (+4/-4) | 46 | 35% (+4/-4) | 17 |
| **2014** | 26% (+3/-3) | 86 | 28% (+4/-4) | 40 |
| **2015** | 30% (+4/-4) | 48 | 22% (+6/-6) | 40 |
| **2016** | 21% (+2/-2) | 98 | 13% (+3/-3) | 52 |
| **2017** | 23% (+3/-3) | 49 | 18% (+4/-4) | 35 |
| **2018** | 21% (+3/-3) | 54 | 23% (+4/-4) | 40 |

**Table 8.** Proportion of BLM Rangelands with Nonnative Invasive Species Present

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 61% (+12/-12) | 46 | 35% (+19/-19) | 17 |
| **2014** | 70% (+9/-9) | 86 | 44% (+12/-12) | 40 |
| **2015** | 54% (+12/-12) | 48 | 46% (+14/-14) | 40 |
| **2016** | 66% (+7/-7) | 98 | 62% (+7/-7) | 52 |
| **2017** | 67% (+14/-14) | 49 | 43% (+14/-14) | 35 |
| **2018** | 70% (+11/-11) | 54 | 34% (+14/-14) | 40 |

**Table 9.** Proportion of BLM Rangelands Where >= 25% of Foliar Cover is Comprised of Nonnative Invasive Species.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 3% (+3/-3) | 46 | 0% (+0/-0) | 17 |
| **2014** | 13% (+6/-6) | 86 | 10% (+7/-7) | 40 |
| **2015** | 12% (+6/-6) | 48 | 21% (+15/-15) | 40 |
| **2016** | 26% (+6/-6) | 98 | 6% (+6/-6) | 52 |
| **2017** | 22% (+9/-9) | 49 | 11% (+7/-7) | 35 |
| **2018** | 19% (+8/-8) | 54 | 3% (+4/-3) | 40 |

**Table 10.** Proportion of Vegetation Composed of Annual Grasses on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 6% (+2/-2) | 46 | 3% (+3/-3) | 17 |
| **2014** | 7% (+2/-2) | 86 | 7% (+4/-4) | 86 |
| **2015** | 9% (+3/-3) | 48 | 12% (+9/-9) | 40 |
| **2016** | 12% (+2/-2) | 98 | 4% (+2/-2) | 52 |
| **2017** | 14% (+4/-4) | 49 | 5% (+3/-3) | 35 |
| **2018** | 12% (+4/-4) | 54 | 3% (+4/-3) | 40 |

**Table 11.** Proportion of Vegetation Composed of Nonnative Invasive Plant Species on BLM Rangelands

.

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 6% (+2/-2) | 46 | 3% (+3/-3) | 17 |
| **2014** | 9% (+2/-2) | 86 | 7% (+4/-4) | 40 |
| **2015** | 9% (+3/-3) | 48 | 14% (+9/-9) | 40 |
| **2016** | 14% (+2/-2) | 98 | 4% (+2/-2) | 52 |
| **2017** | 14% (+4/-4) | 49 | 5% (+3/-3) | 35 |
| **2018** | 12% (+4/-4) | 54 | 3% (+4/-3) | 40 |

## 1.2. Habitat conditions within seasonal habitat areas

### 1.2.1. Habitat Objectives Summary Table

**Table 12.** Habitat Objectives Summary Table

| Nesting Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Total Percent** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Meeting** | **Not Meeting** |
| Sagebrush Cover | Arid: 15–30% | 12 | 36.4% | 21 | 63.6% | 0 | 0.0% | 36% | 64% |
| | Mesic: 20–30% | 10 | 35.7% | 18 | 64.3% | 0 | 0.0% | | |
| Sagebrush Height | Arid: 30–80 cm | 19 | 57.6% | 14 | 42.4% | 0 | 0.0% | 49% | 51% |
| | Mesic: 40–80 cm | 11 | 39.3% | 17 | 60.7% | 0 | 0.0% | | |
| Predominant Sagebrush Shape | >50% Spreading | 42 | 68.9% | 19 | 31.1% | 0 | 0.0% | 69% | 31% |
| Perennial Grass Cover | Arid: ≥ 10% | 23 | 69.7% | 10 | 30.3% | 0 | 0.0% | 79% | 21% |
| | Mesic: ≥ 20% | 25 | 89.3% | 3 | 10.7% | 0 | 0.0% | | |
| Perennial Grass and Forb Height | > 6 inch (15.2 cm) | 50 | 82.0% | 11 | 18.0% | 0 | 0.0% | 82% | 18% |
| Perennial Forb Cover | Arid: ≥ 5% | 11 | 33.3% | 22 | 66.7% | 0 | 0.0% | 30% | 70% |
| | Mesic: ≥ 15% | 7 | 25.0% | 21 | 75.0% | 0 | 0.0% | | |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | Arid: 15–30% | 10 | 32.3% | 21 | 67.7% | 0 | 0.0% | 33% | 67% |
| | Mesic: 20–30% | 4 | 36.4% | 7 | 63.6% | 0 | 0.0% | | |
| Sagebrush Height | Arid: 30–80 cm | 19 | 61.3% | 12 | 38.7% | 0 | 0.0% | 60% | 40% |
| | Mesic: 40–80 cm | 6 | 54.5% | 5 | 45.5% | 0 | 0.0% | | |
| Predominant Sagebrush Shape | >50% Spreading | 20 | 47.6% | 22 | 52.4% | 0 | 0.0% | 48% | 52% |
| Perennial Grass Cover | Arid: ≥ 10% | 22 | 71.0% | 9 | 29.0% | 0 | 0.0% | 76% | 24% |
| | Mesic: ≥ 20% | 10 | 90.9% | 1 | 9.1% | 0 | 0.0% | | |
| Perennial Grass and Forb Height | > 6 inch (15.2 cm) | 36 | 85.7% | 6 | 14.3% | 0 | 0.0% | 86% | 14% |
| Perennial Forb Cover | Arid: ≥ 5% | 7 | 22.6% | 24 | 77.4% | 0 | 0.0% | 33% | 67% |
| | Mesic: ≥ 15% | 7 | 63.6% | 4 | 36.4% | 0 | 0.0% | | |

**Table 12** *(continued)*. Habitat Objectives Summary Table

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Total Percent** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Meeting** | **Not Meeting** |
| Sagebrush Cover | Arid: 10–25% | 50 | 47.2% | 56 | 52.8% | 0 | 0.0% | 47% | 53% |
| | Mesic: 10–25% | 50 | 47.2% | 56 | 52.8% | 0 | 0.0% | | |
| Sagebrush Height | Arid: 30–80 cm | 75 | 70.8% | 31 | 29.2% | 0 | 0.0% | 61% | 39% |
| | Mesic: 35–80 cm | 54 | 50.9% | 52 | 49.1% | 0 | 0.0% | | |
| Perennial Grass Cover and Forbs | Arid: ≥ 15% | 90 | 84.9% | 16 | 15.1% | 0 | 0.0% | 88% | 12% |
| | Mesic: ≥ 25% | 96 | 90.6% | 10 | 9.4% | 0 | 0.0% | | |
| Perennial Forb Availability | ≥ 5 species common | 200 | 94.3% | 12 | 5.7% | 0 | 0.0% | 94% | 6% |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | Arid: 10–25% | 30 | 25.6% | 87 | 74.4% | 0 | 0.0% | 27% | 73% |
| | Mesic: 10–25% | 18 | 29.5% | 43 | 70.5% | 0 | 0.0% | | |
| Sagebrush Height | Arid: 30–80 cm | 67 | 57.3% | 50 | 42.7% | 0 | 0.0% | 56% | 44% |
| | Mesic: 35–80 cm | 33 | 54.1% | 28 | 45.9% | 0 | 0.0% | | |
| Perennial Grass Cover and Forbs | Arid: ≥ 15% | 66 | 56.4% | 51 | 43.6% | 0 | 0.0% | 69% | 31% |
| | Mesic: ≥ 25% | 56 | 91.8% | 5 | 8.3% | 0 | 0.0% | | |
| Perennial Forb Availability | ≥ 5 species common | 143 | 80.3% | 35 | 19.7% | 0 | 0.0% | 80% | 20% |
| **Winter** | | | | | | | | | |
| **PHMA** | | | | | | | | | |
| Sagebrush Cover (Above Snow) | Arid: > 20% | NA | | NA | | 139 | 100.0% | NA | NA |
| | Mesic: > 25% | NA | | NA | | 134 | 100.0% | NA | NA |
| Sagebrush Height (Above Snow) | > 10 inch (25.4 cm) | NA | | NA | | 273 | 100.0% | NA | NA |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover (Above Snow) | Arid: > 20% | NA | | NA | | 145 | 100.0% | NA | NA |
| | Mesic: > 25% | NA | | NA | | 72 | 100.0% | NA | NA |
| Sagebrush Height (Above Snow) | > 10 inch (25.4 cm) | NA | | NA | | 217 | 100.0% | NA | NA |

### 1.3. Habitat trigger summary

There have been no soft or hard triggers tripped in Colorado from 2015 to 2019. Therefore, a causal factor analysis has never been formally completed. See results section 4.1 for additional details on population triggers.

**Table 13.** Habitat Trigger Summary

| Year | Number and Location of Soft Habitat Triggers Tripped | Number and Location of Hard Habitat Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | 0 | 0 | NA |
| **2016** | 0 | 0 | NA |
| **2017** | 0 | 0 | NA |
| **2018** | 0 | 0 | NA |
| **2019** | 0 | 0 | NA |

The habitat trigger for cumulative loss of sagebrush cover (30% loss threshold) since the LUP was established is presented in the table below.

**Table 14.** Overall Change in Sagebrush Cover by Biologically Significant Unit

| Biologically Significant Unit (BSU) | Overall Change in % of BpS that is EVT on PHMA in BSU from 2012 to 2018 |
|---|---|
| Meeker/White River | 2.43% |
| Middle Park | 1.89% |
| North Eagle/ South Routt | 1.69% |
| North Park | 1.70% |
| Northwest Colorado | 4.66% |
| Parachute/Piceance/Roan | 1.74% |

## 2. Land Health Standards Evaluations

### 2.1. Category A

These rangelands in Colorado are meeting all standards or making significant progress toward meeting the standard.

**Table 15.** Land Health Standards Evaluations in Category A

| Year | BLM Acres in Assessed Allotments |
|---|---|
| 2015 | 68,778 |
| 2016 | 334 |
| 2018 | 126,217 |
| 2019 | 17,142 |
| **Total** | **212,471** |

### 2.2. Category B

These rangelands in Colorado are not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (livestock is a significant factor).

**Table 16.** Land Health Standards Evaluations in Category B

| Year | BLM Acres in Assessed Allotments |
|---|---|
| 2015 | 15,656 |
| 2016 | 41,676 |
| 2018 | 0 |
| 2019 | 0 |
| **Total** | **57,332** |

## 3. Surface Disturbance in PHMA

The results of the number of BLM authorizations and acres disturbed per LUP Decision or Program Area disturbance type in total since 2015 through 2019 are displayed in the following table. The Colorado BLM authorized 11 surface disturbing activities in PHMA resulting in a total of 264 acres of disturbance from 2015 through 2019, which were in compliance with the land use plan disturbance cap. The BLM authorized an additional 34 fluid mineral leases in PHMA (consistent with GRSG ARMPA stipulations and notices) encompassing 34,015 leased acres, which could result in future surface disturbing activities if an Application for Permit to Drill (APD) is approved on these leased acres and an exception to the current No Surface Occupancy (NSO) stipulation in PHMA is granted.

**Table 17.** Count of Authorizations in GRSG PHMA from 2015–2019

| Decision/Program Area | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA | Count of Authorizations Exceeding the Disturbance Cap |
|---|---|---|---|
| Coal Leasing | 0 | 0 | 0 |
| Fluid Mineral Leasing (O&G) | 34[1] | 34,015 | 0 |
| Geothermal Energy | 0 | 0 | 0 |
| Locatable Minerals | 0 | 0 | 0 |
| Nonenergy Leasable Minerals | 0 | 0 | 0 |
| Rights-of-Way | 6 | 54 | 0 |
| Salable - Mineral Materials Disposals | 3[2] | 97 | 0 |
| Solar Energy | 0 | 0 | 0 |
| Trails & Travel Management | 0 | 0 | 0 |
| Utility Corridors | 0 | 0 | 0 |
| Wind Energy | 0 | 0 | 0 |
| **TOTALS** | **37** | **34,166** | **0** |

[1] Fluid Mineral Leasing is not a surface disturbing activity until an APD has been approved by the BLM and an exception is granted for the NSO stipulation applied to PHMA.
[2] All authorizations were a reauthorization of existing mineral material mining permits.

The existing disturbance and density caps for PHMA are presented in the table below for each BSU and Colorado MZ. As discussed in methods section 3, these calculations were updated by the BLM Colorado State Office as of June 2020 using the 2019 HMAs to provide a current estimate of the disturbance and density caps. According to the Northwest Colorado GRSG ARMPA, disturbances in PHMA are limited to 3 percent with the associated density cap set to no more than an average of 1 facility per 640 acres. As seen in the table below, none of the BSUs are over the 3 percent disturbance cap, but the Parachute Piceance Roan BSU has reached the 1 facility per 640 acres density cap. In addition, Colorado MZ 16, which is part of the Parachute Piceance Roan BSU, exceeds both the disturbance and density cap. Management Zone 16 is the smallest Colorado MZ with only approximately 5,202 acres of PHMA. This small size is one contributing factor to cap exceedance when compared to other Colorado MZs with nearly 11,000 acres (Zone 1 and Zone 15) or over 200,000 acres (Zone 5 and Zone 9) of PHMA. It should also be noted that Zone 16 was completely leased for federal fluid minerals in 1939 and has since experienced high oil and gas development prior to the 2015 Northwest Colorado GRSG ARMPA.

**Table 18.** Surface Disturbance and Density Cap in GRSG PHMA for BSU and Colorado MZ

| Biologically Significant Unit (BSU) | Colorado Management Zone (MZ) | BSU Disturbance Cap (%) | Colorado MZ Disturbance Cap (%) | BSU Density Cap (average) | Colorado MZ Density Cap (average) |
|---|---|---|---|---|---|
| Northwest Colorado[1] | MZ 1 | 0.81 | 0.67 | 0.23 | 0.00 |
| | MZ 2 | | 0.78 | | 0.49 |
| | MZ 3 | | 0.87 | | 0.59 |
| | MZ 4 | | 0.66 | | 0.06 |
| | MZ 5 | | 1.08 | | 0.28 |
| | MZ 6 | | 0.51 | | 0.15 |
| | MZ 7 | | 0.67 | | 0.37 |
| | MZ 8 | | 0.51 | | 0.08 |
| | MZ 9 | | 1.25 | | 0.15 |
| | MZ 10 | | 0.34 | | 0.07 |
| North Park | MZ 11 | 0.94 | 0.94 | 0.53 | 0.53 |
| Middle Park | MZ 13 | 0.58 | 0.58 | 0.05 | 0.05 |
| Eagle South Routt | MZ 14 | 0.78 | 0.78 | 0.02 | 0.02 |
| Meeker White River | MZ 15 | 0.04 | 0.04 | 0.12 | 0.12 |
| Parachute Piceance Roan[2] | MZ 16 | 2.06 | 9.41 | 1.02 | 2.34 |
| | MZ 17 | | 1.95 | | 0.90 |

[1]The Northwest Colorado BSU population is composed of Colorado MZs 1-10.
[2]The Parachute Piceance Roan BSU population is composed of Colorado MZs 16 and 17.

# 4. Sage-Grouse Population Trends (in cooperation with CPW state wildlife agency)

## 4.1. Population trigger summary by year

As discussed in methods sections 1.3 and 4, a hard population trigger is tripped when Northwest Colorado male lek counts drop below 1,575 and North Park male lek counts drop below 670 simultaneously, in addition both populations must show a 30 percent cumulative loss of available habitat within PHMA from when the ROD for the LUP was signed. As seen in the following table, the

Northwest Colorado and North Park populations have not dropped below the 3-year average set by the hard trigger.

**Table 19.** Hard and Soft Population Triggers Tripped

| Year | Northwest Colorado 3-Year Average Male Lek Count | North Park 3-Year Average Male Lek Count | Number and Location of Soft Population Triggers Tripped | Number and Location of Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|---|---|
| 2015 | 3,193 | 904 | 0 | 0 | NA |
| 2016 | 4,258 | 1,080 | 0 | 0 | NA |
| 2017 | 4,613 | 1,127 | 0 | 0 | NA |
| 2018 | 3,874 | 1,057 | 0 | 0 | NA |
| 2019 | 2,485 | 866 | 0 | 0 | NA |

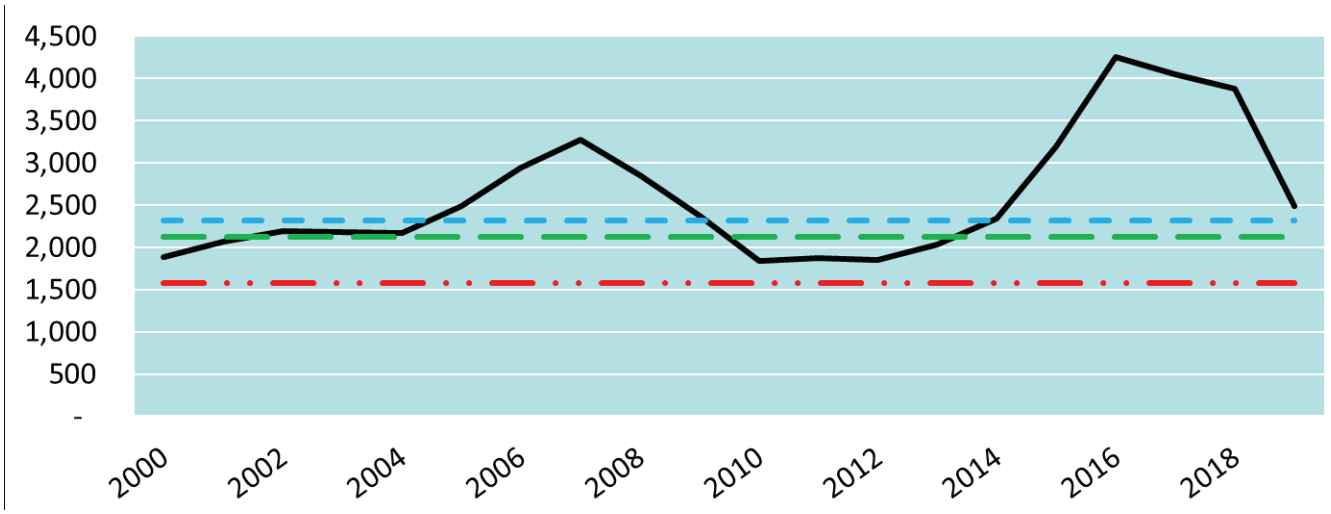



**Figure 13.** Northwest Colorado population trend showing the 3-year average male lek count (black line) and the hard trigger value of 1,575 (red dotted line). The median (green dotted line), 25% quartile (red dotted line), and 75% quartile (blue dotted line) are also represented on the graph for context.

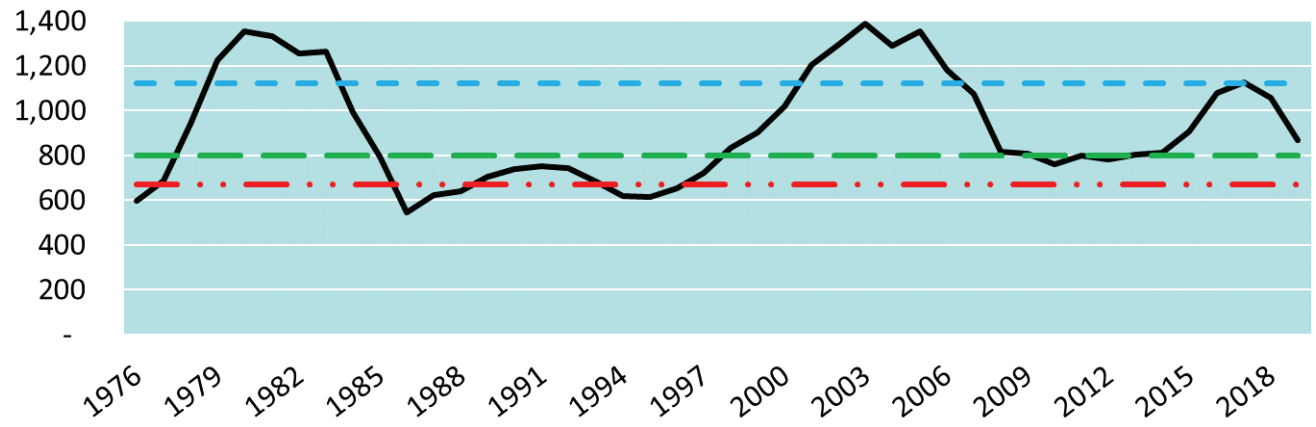



**Figure 14.** North Park population trend showing the 3-year average male lek count (black line) and the hard trigger value of 670 (red dotted line). The median (green dotted line), 25% quartile (red dotted line), and 75% quartile (blue dotted line) are also represented on the graph for context.

According to the Northwest Colorado ARMPA soft triggers serve as an intermediate threshold indicating management changes are needed to address population losses at either the BSU or Colorado MZ level. As seen in the table below, Colorado has 6 BSUs, which are composed of 16 Colorado MZs.

**Table 20.** Biologically Significant Units and Colorado Management Zones

| **Northwest Colorado BSU** | |
|---|---|
| West of Green River | MZ 1 |
| Cold Springs/Hiawatha | MZ 2 |
| Sand Wash/Powder Wash | MZ 3 |
| Great Divide West | MZ 4 |
| Great Divide North | MZ 5 |
| Great Divide Southeast | MZ 6 |
| NE Moffat/NW Routt | MZ 7 |
| Craig to Hayden Hwy 40 Corridor | MZ 8 |
| Maybell/Axial Basin | MZ 9 |
| Blue Mountain/Elk Springs | MZ 10 |
| **North Park BSU** | |
| North Park | MZ 11 |
| **Middle Park BSU** | |
| Middle Park | MZ 13 |
| **Eagle-South Routt BSU** | |
| Eagle-South Routt | MZ 14 |
| **Parachute-Piceance-Roan BSU** | |
| Magnolia | MZ 16 |
| Parachute-Piceance-Roan | MZ 17 |
| **Meeker-White River** | |
| Meeker-White River | MZ 15 |

As of 2018, the BLM Colorado in coordination with CPW, had determined that no soft triggers for the Colorado MZs or BSUs had been tripped. Currently, the majority of Colorado BSUs and MZs have not experienced population losses that are to a level of concern or threshold that would require a soft trigger causal factor analysis. After reviewing the 3-year average for 2019 for the above Colorado MZs, there was some preliminary discussion by BLM Colorado and CPW on potential soft trigger analysis for the Great Divide, North Eagle-South Routt, Parachute-Piceance-Roan, and Meeker-White River population areas because these MZs have either dipped below the 25 percent quartile or are approaching this threshold. More specifically, within the Eagle-South Routt population, CPW has started a 3-year translocation program to try and boost population numbers. It should be noted that within the Parachute-Piceance-Roan population the last 2 years of lek counts (2018 and 2019) were not conducted to the usual fixed-wing flight protocol due to helicopter malfunctions and as such has likely led to lower detection probability than normal. Therefore, the 2018 and 2019 male lek counts are likely lower than expected.

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data, as described above with additional information provided by the BLM Colorado State Office as available. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the sage-grouse range. For 2 of the 4 questions below, additional BLM Colorado specific data was provided in this report to help answer these monitoring questions as described under the methods section.

1. Is the land use plan area meeting the sage-grouse habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the habitat objectives table by seasonal habitat. The Habitat Objectives Table (table 2-2) in the GRSG ARMPA describes the desired habitat conditions for GRSG. These desired conditions are composed of multiple indicators and values used to inform whether seasonal habitats are meeting GRSG habitat objectives. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the indicators may not be achievable on every acre (e.g., site potential) that BLM manages. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within habitat management areas may fall within nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities.

   While habitat cover indicators and their corresponding values can be evaluated individually, as provided under results section 1.2, a full assessment of whether a site is meeting seasonal habitat objectives is accomplished using the site-scale component of the Habitat Assessment Framework (HAF). In a site-scale assessment, the suitability of a particular site (plot) would be based on the values of multiple indicators to determine if the location is suitable, marginal, or unsuitable as sage-grouse seasonal habitat. It is understood that not every site can meet desired conditions, based on ecological site descriptions of site potential. It is important to evaluate site potential because it helps identify those sites that are unable to meet desired conditions; however, site potential is assessed separately from GRSG habitat suitability. Therefore, site suitability needs to be assessed at a fine scale to account for site potential. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within habitat management areas may fall within nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities.

These site-scale HAF assessments will not only determine whether seasonal habitat objectives are being met but will also be included in a multiscale habitat assessment to evaluate parameters important to GRSG at broader scales. It should be noted that no single indicator will be used to determine site suitability or whether habitat objectives are being met. Rather it is the full suite of indicators are required to evaluate habitat objectives and site suitability. Therefore, the conclusions from the habitat objectives do not represent the landscape as a whole. Rather, it is solely based on the percentage of monitoring locations across the HMAs that are within the desired range of values for a particular indicator and does not address seasonal habitat suitability, site scale suitability, or site potential.

The BLM Colorado State Office is working to analyze the data presented in this report at the fine-scale (site-scale) to inform multiscale HAF assessments and report the condition of seasonal habitats for specific GRSG populations. These weighted analyses will also provide suitability estimates for the proportion of seasonal habitat condition across biologically appropriate areas, where possible. For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. BLM policy directs the field to use the data collected for these habitat indicators as a whole when assessing suitability of sage-grouse habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) are then used during land health evaluations and NEPA analyses in authorization processes.

***Nesting and Early Brood-Rearing Seasonal Habitat***

Within PHMA and GHMA for nesting and early brood-rearing habitat, 64% and 67% of plots respectively, are not within the desired value for sagebrush cover with 51% of plots not meeting sagebrush height. These monitoring locations could have either, low ecological site potential for sagebrush cover, or the measured sagebrush cover values could be slightly above or below the desired condition. These aspects will be further analyzed within HAF summary reports.

For both PHMA and GHMA, perennial grass cover, and perennial grass and forb height within nesting and brood-rearing habitat are meeting the desired conditions for the majority of locations. Although 70% of PHMA and 67% of GHMA plots are not meeting the desired condition for perennial forb cover, perennial grass and forb height is meeting at over 80% of all locations. Also, perennial grass cover is meeting on over 75% of the total locations monitored.

Overall, for arid and mesic sites combined, 3 of the 6 indicators within nesting and early brood-rearing habitat in PHMA are meeting at greater than 69% of plots (i.e., sagebrush shape, perennial grass cover, perennial grass and forb height) which suggests these are likely not limiting factors. The trend of the remaining indicators, which are less than 49% (sagebrush cover, sagebrush height, and perennial forb cover) need to be monitored more closely to determine trend and whether these indicators are making progress toward meeting the desired conditions across PHMA.

***Late Brood-Rearing and Summer Seasonal Habitat***

Within PHMA and GHMA for late brood-rearing/summer habitat, 53% and 73% of plots respectively, are not within the desired value for sagebrush cover. However, 61% (PHMA) and 56% (GHMA) of plots, are within the desired condition for sagebrush height. Within PHMA and GHMA the perennial grass and forb cover is meeting for 88% and 69% of plots, respectively. Perennial forb availability within PHMA and GHMA is meeting for the majority of locations with nearly 94% and 80%, respectively, of sampled plots achieving this desired condition.

Overall, for arid and mesic sites combined, 3 of the 4 indicators within late brood-rearing/summer habitat in PHMA and GHMA are meeting at greater than 56% of plots (i.e., sagebrush height, perennial grass and forb cover, perennial forb availability), which suggests these are likely not limiting factors. In

fact, 94% of plots in PHMA are meeting the forb availability indicator with ≥ 5 or more forb species. Sagebrush cover in PHMA is meeting at 47% of the plots, with only 27% of the plots in GHMA meeting. This could suggest that sagebrush cover is a limiting factor; however, site potential and trend still need to be further evaluated to determine whether these indicators are making progress toward meeting the desired conditions across PHMA.

***Winter Seasonal Habitat***

Winter seasonal habitat indicators were not assessed for monitoring plot locations because the BLM Colorado did not have sufficient or accurate snow depth data to properly assess each monitoring location. Accurate estimates for snow depth are necessary for evaluating both the sagebrush height and cover above snow. Without measured estimates for snow depth at these monitoring locations, assessing these indicators would have been somewhat speculative and not provided an accurate assessment of sagebrush availability above snow. These indicators will be assessed on a site-scale basis using the HAF and coordination from CPW.

It should be noted that winter climatic features change on a daily basis given variable snowfall levels and movement of snow by wind. The movement of snow can create deep snow drifts, which may bury some sagebrush but expose other sagebrush to below expected average snow depths. For example, GRSG have been documented using black sagebrush, a very short statured species, on hillsides and slopes during the winter months. The use of these areas is likely correlated to snow movement along these windswept ridges. The winter habitat indicators should therefore be interpreted with caution based on the data limitations and variable climatic factors. Weather patterns are also highly variable across these monitoring locations and therefore some years may provide sagebrush that is fully accessible to GRSG during the winter months.

***Seasonal Habitat Discussion***

The desired habitat conditions discussed here are not attainable on every acre within GRSG HMAs and therefore the determination on whether habitat objectives have been met will be based on ecological site potential during the HAF and land health evaluations. It should be noted that BLM Colorado is unable to evaluate treatment effectiveness and which areas or plots are making progress toward meeting these habitat objectives, due to the single indicator analysis, and lack of reliable site potential data. Treatments such as riparian structures for restoration, changes to grazing management, juniper removal from sagebrush stands, and native plant seedings are examples of treatments applied across GRSG HMAs to improve seasonal habitat and make progress toward meeting the desired conditions.

***Overall Range Habitat Conditions***

LMF data was also collected within a subset of occupied habitat, as identified by an interagency group of experts in 2013. Indicator means were calculated for each annual subset of LMF data from 2013 – 2018, only the ranges of the values are discussed below. Although this inference space and data analysis is not directly comparable to the seasonal habitat analysis using AIM data, it can provide additional insight into the conditions of sage-grouse range in Colorado. The AIM analysis referenced above indicates that under 40 percent of sage-grouse sites in Colorado meet objectives for sagebrush cover; this is corroborated by the LMF type I data estimating that mean sagebrush cover condition is between 10-15% depending on year, barely reaching the lower end of the habitat objectives threshold for summer (10%) or breeding (15%) seasons (table 1). This suggests that the majority of sage-grouse range in Colorado is not currently meeting the sagebrush cover habitat objective.

Four additional LMF indicator calculations have direct correlates in the habitat objectives table for this planning area: sagebrush height, predominantly spreading sagebrush condition, perennial grass and forb cover, and perennial grass and forb height. In all four cases the LMF analysis supports the results from the equivalent AIM analysis for those indicators. For sagebrush height, the AIM analysis suggests the

majority of plots are meeting the habitat objective, and the LMF data support this by estimating mean sagebrush height (36-50 cm) within the meeting range for this indicator (table 2). In both AIM and LMF results, the majority of the plots consisted predominantly of spreading sagebrush shape (table 4). The LMF means for both perennial grass and forb height and cover were near or above the mesic thresholds suggesting the majority of inference space is meeting for those indicators, as are the majority of plots meeting in the AIM analysis. Perennial grass and forb cover from LMF ranges from a mean of 21-35%, (table 5) and for height has a range from a mean of 8.24-11.29 inches (table 6).

Out of the five indicators with correlates in both the AIM and LMF data, the majority of plots were not meeting for sagebrush cover, whereas the majority were meeting for the other four habitat objectives. In all cases LMF corroborated the results of the AIM analysis.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   According to the 2019 HMA boundaries, a total of 616 allotments administered by BLM Colorado contain some portion of PHMA or GHMA acres. These allotments account for 4,270,620 BLM acres total. Of the acres, 212,471 BLM acres were assessed to be meeting, or making progress toward meeting the land health standards. In addition, 57,332 BLM acres were not meeting land health standards and grazing was the causal factor, but management was changed to help make progress toward meeting the standard. This data only partially answers the question by describing the final evaluation of the land health standards and does not specifically address the results of the sensitive species standard. Furthermore, rangelands not meeting standards or making significant progress toward meeting the standards, where no appropriate action has been taken to ensure significant progress toward meeting the standards (category C) and rangelands not meeting all standards or making significant progress toward meeting the standards due to causes other than livestock grazing (category D) have not been reported here. The BLM Colorado is currently in the process of addressing LHS for GRSG using HAF for allotments with GRSG habitat. Once these HAF assessments are completed they will help inform LHS, including the special status species habitat standard.

3. Is the land use plan area meeting the disturbance objective(s) within sage-grouse areas?

   The BLM Colorado monitoring and disturbance data presented in results section 3 indicates that the amount of disturbance within the planning area for BSUs has remained under the disturbance cap, with one BSU having reached the density cap described in the LUP. While Colorado MZ 16 is over the disturbance and density cap, this is at the project scale and exceeded surface disturbance prior to the 2015 ARMPA. Furthermore, BLM Colorado is implementing management actions, such as no new leasing within PHMA in the Parachute Piceance Roan BSU and in MZ 16 (MD MR-6, ARMPA), until the disturbance and density caps are below the 3% cap and 1 disturbance per 640 acres, respectively. This can be accomplished through reclamation and restoration of surface disturbances within the respective Colorado MZ.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   As seen in the population graphs provided in results section 4, the majority of GRSG Colorado MZs experienced an increase in population growth roughly starting in 2015 at the initiation of the Northwest Colorado GRSG ARMPA. Currently the GRSG populations in Colorado have declined a total of 34% in 2019 when compared to 2018, with the Northwest Colorado BSU at a 38% decline. The North Park

BSU only declined a total of 16% by comparison from 2018 to 2019. However, the high snow depths in the winter of 2019 prevented biologists from accessing some of the traditional lek sites, so early season counts were impacted. The deep snow also buried many of the lek sites and biologists were not able to determine effects on mating, reproduction, or chick survival.

Although these decreases in high male lek counts appear to be part of the normal fluctuations and cyclical pattern seen in sage-grouse populations, the declines were more precipitous than normally expected. CPW is currently waiting for the 2020 male lek counts to help determine how much of the declines seen in 2019 were impacted by lack of access rather than a biological decline.

To assess the overall population trend, CPW uses the high male count for leks compared to the long-term average. This long-term average is different for each population because it is based on when standard lek monitoring protocols were implemented for each population. As of 2019 there has been a 17% decline in GRSG populations across all Colorado MZs compared to the long-term average. In 2019, the North Park BSU was down 3% compared to the 45-year long-term average and the Northwest Colorado BSU was down 9% compared to the 21-year long-term average. These long-term estimates are useful because they incorporate the fluctuation at both ends of the spectrum by including both the highs and lows of the cyclical population pattern.

In conclusion, this appendix to the National 2020 report is an implementation monitoring report rather than an assessment of effectiveness of the conservation measures in the 2015 sage-grouse land use plans. This is a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 9: Idaho State Office Monitoring Report for the 2015 Idaho and Southwestern Montana Subregion Land Use Plan Amendment

2015–2020

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# Appendix 9: Idaho State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 9: Idaho State Office Monitoring Report for the 2015 Idaho and Southwestern Montana Subregion Land Use Plan Amendment

## 2015–2020

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# Introduction

This BLM Idaho State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Monitoring Report). This appendix describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures from land use plan approved resource management plan amendment in Idaho covered by the 2015 GRSG Records of Decision (RODs). The BLM Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 planning-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (5 questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the Approved Resource Management Plan Amendment within Idaho and answers the following four questions:

1. Are the plans meeting the sage-grouse habitat objectives?
2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

The BLM Idaho State Office monitored four factors (one factor per monitoring question) in LUP-designated sage-grouse habitat management areas within September 15 Approved Resource Management Plan Amendment planning area in Idaho:

- Habitat conditions, as articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)
- Land Health Standards evaluations
- Surface disturbance in PHMA and IHMA Sage-grouse population trends (in coordination with the state wildlife agency).

BLM Idaho State Office used the following methods for the four factors.

# 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

## 1.1. Habitat conditions statewide

Summaries of 11 indicators of importance to sage-grouse rangewide were generated within Greater Sage-Grouse habitat (type I) and outside of Greater Sage-Grouse habitat (type II) on BLM lands in Idaho. These indicators are generally recognized as important components of Greater Sage-Grouse Habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Table. These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the Rangewide Monitoring report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 – **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Habitat conditions within seasonal habitats

In addition, summaries of LMF and field-office collected AIM data were generated to evaluate how frequently quantitative habitat objectives, as detailed in each LUP Habitat Objectives Table, were met within seasonal habitats within Habitat Management Areas. If no seasonal habitats are delineated in the LUP area, the sampling date was used to group plots in Habitat Management Areas, so each summary for that area reflects the timeframes associated with each seasonal use period identified in the Habitat Objectives Table. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. They are not weighted to represent to the overall area sampled.

The site-scale toolbox was used in ArcMap to extract and evaluate the AIM and LMF points within sage-grouse habitat in Idaho. The toolbox extracts AIM and LMF points based on the area input into the toolbox. The toolbox was run three times; once for each habitat management area (i.e., priority habitat management area (PHMA), important habitat management area (IHMA), and general habitat management area (GHMA). The site-scale toolbox extracted the AIM and LMF points that were within the habitat management areas. The seasonal habitats (nesting/early brood-rearing, late brood-rearing/summer, and winter) have been delineated for Idaho and were used in the toolbox to identify the points within seasonal habitats. Additionally, the toolbox identified the points collected during the seasonal habitat use periods (e.g., nesting/early brood-rearing use period May 1 – June 30). The points were then evaluated based on desired conditions (indicator values) listed in table 2-2 of the Idaho and Southwestern Montana ARMPA. The toolbox provided a summary of points in an excel spreadsheet by plot and by individual indicators for each seasonal use area. The summary data was used to provide the numbers in the results table below. Riparian and Wetland riparian conditions used for this report were those contained in the National PFC (Proper Functioning Condition) Database.

## 1.3. Habitat conditions

Adaptive Management Habitat Triggers: The method used annually to determine whether soft or hard habitat triggers had been tripped used the following methodology as described in the ARMPA: Idaho BLM calculated habitat triggers annually for adaptive management purposes in 8 Biologically Signifi-

cant Units (BSU) in PHMA and IHMA within 4 Conservation Areas (Desert, Mountain Valleys, Southern and West Owyhee). One habitat hard trigger in one BSU was tripped initially in 2015 and remained tripped each year thereafter. One habitat soft trigger was tripped during the past 5 years.

*Note that these methods apply to this specific BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the* ***Biologically Significant Unit*** *(BSU) scale.*

## 2. Land Health Standards (LHS) Evaluations

Summarized data for allotments that contain any sage-grouse habitat in the planning area was used to address this factor. This data is summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in two categories:

### 2.1. BLM acres of Category A allotments that contain SG habitat

All LHS are achieved or significant progress toward achieving is being made.

### 2.2. BLM acres of Category B allotments that contain SG habitat

These are not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress towards achieving LHS.

## 3. Surface Disturbance in PHMA and IHMA

The methods used to track the number of BLM-authorized surface disturbing actions in SG PHMA and IHMA within the planning area and to calculate the amount of disturbance associated with each proposal prior to authorization are:

A report was pulled from LR2000 by querying Casetypes that included Acquisitions, Grants, Roads, Power, Communications, Water, Pipeline, Leases-Permits-Easements, O&G, Geothermal, Coal, Solid Rock, Community Pit, Common Use, Mineral Fee Sales, and Mining Class-Contest-Appeal. The report included the following fields: Casetype Code, Commodity, Commodity Code, Disposition, Disposition Date, Serial Number Full, Total Case Acres, Township, Range, Section, Aliquot Part, Action, Action Date, and Action Remark. The first step was to reformat the legal description field of the LR200 Report (at the section level) to match the cadastral data (CADNSDI First Division). The second step was to use table joins and manual inspection within ArcMap to identify only those aliquots that intersect Priority or Important Habitat Management Areas (PIHMA). The third step limited those actions by filtering the Action Date to 2016 or newer, to limit the actions to new disturbances since the September 2015 ARMPA was signed. This resulted in sixteen unique serial numbers. On fourteen of those, the acreage listed in LR2000 seemed reasonably close to on-the ground disturbance, so the LR2000 Total Case Acreages were used. Total Case Acreages seemed high for the remaining three actions representing large power transmission lines. Acreage for the two remaining actions were calculated using geospatial linear features, buffered by the appropriate width, and that intersected with PHMA and IHMA.

*Note that the methods previously described apply at the project scale. The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.*

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following LUP-defined methodology: BLM staff in the Idaho State Office met with the Idaho Department of Fish and Game every year to review the population data and calculate the formula for the population triggers for adaptive management purposes. Overall, population hard triggers were tripped six times in four different BSUs. Two population soft triggers were tripped in 2 BSUs during the past 5 years.

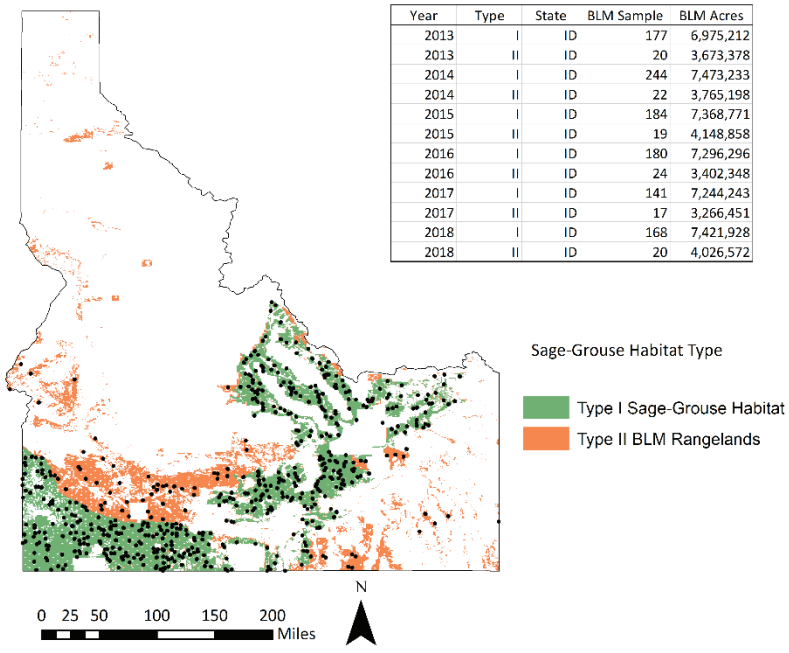
# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance in PHMA and IHMA, and sage-grouse population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses

Idaho plot locations used to derive statewide estimates




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | ID | 177 | 6,975,212 |
| 2013 | II | ID | 20 | 3,673,378 |
| 2014 | I | ID | 244 | 7,473,233 |
| 2014 | II | ID | 22 | 3,765,198 |
| 2015 | I | ID | 184 | 7,368,771 |
| 2015 | II | ID | 19 | 4,148,858 |
| 2016 | I | ID | 180 | 7,296,296 |
| 2016 | II | ID | 24 | 3,402,348 |
| 2017 | I | ID | 141 | 7,244,243 |
| 2017 | II | ID | 17 | 3,266,451 |
| 2018 | I | ID | 168 | 7,421,928 |
| 2018 | II | ID | 20 | 4,026,572 |

**Figure 1.** Idaho habitat conditions for type I (BLM lands within sage-grouse habitat) and type II (BLM rangelands outside of sage-grouse habitat) and summary table of number of BLM sample points and BLM acres.

Number of monitoring locations per year used to derive the estimates in Idaho

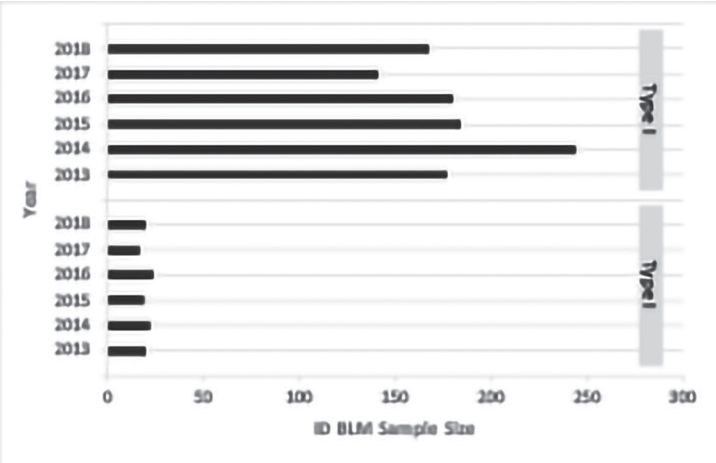



**Figure 2.** Number of BLM sample points by type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside sage-grouse habitat) within Idaho.

**1.1.1.** Additional indicators that will be provided for habitat (type I) and nonhabitat (type II) within the state: percent foliar cover of sagebrush; percent foliar cover of perennial grasses and forbs; mean sagebrush height (inches); mean herbaceous plant height (inches); percent of sagebrush cover that is columnar in sagebrush shape; percent of sagebrush cover that is spreading in sagebrush shape; percent of areas with invasive plant species present; percent foliar cover of annual grasses; percent cover of bare ground.

**Table 1.** Summary of Eleven Indicators for Type I (BLM lands within sage-grouse habitat) between 2013 and 2018

| Type I | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 13% (+1/-1) | 11% (+1/-1) | 11% (+1/-1) | 12% (+2/-2) | 14% (+2/-2) | 13% (+2/-2) |
| Mean sagebrush species height in inches on BLM rangelands | 15.27 (+1.02/-1.01) | 15.93 (+.88/-.89) | 20.19 (+1.15/-1.14) | 20.99 (+1.26/-1.25) | 16.18 (+1.06/-1.06) | 17.09 (+1.13/-1.14) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 41 (+5/-5) | 26 (+4/-4) | 28 (+4/-4) | 31 (+5/-5) | 30 (+6/-6) | 59 (+5/-5) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 59 (+5/-5) | 74 (+4/-4) | 72 (+4/-4) | 69 (+5/-5) | 70 (+6/-6) | 41 (+5/-5) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 31% (+1/-1) | 32% (+2/-2) | 35% (+2/-2) | 51% (+3/-3) | 47% (+3/-3) | 47% (+3/-3) |
| Mean herbaceous plant species height in inches on BLM rangelands | 8.57 (+.31/-.3) | 11.41 (+.44/-44) | 14.89 (+.58/-.58) | 14.81 (+.6/-.6) | 15.77 (+.66/-.67) | 14.54 (+.55/-.55) |
| Percent cover of bare ground on BLM rangelands | 19% (+1/-1) | 23% (+2/-2) | 22% (+2/-2) | 12% (+3/-3) | 9% (+1/-1) | 9% (+1/-1) |
| Proportion of BLM rangelands with nonnative invasive species present | 9 (+2/-2) | 11 (+2/-2) | 17 (+3/-3) | 18 (+3/-3) | 21 (+3/-3) | 23 (+5/-5) |
| Proportion of BLM rangelands where >= 25% of foliar cover is comprised of nonnative invasive species | 15% (+5/-5) | 18% (+3/-3) | 27% (+5/-5) | 31% (+5/-5) | 34% (+5/-5) | 41% (+9/-9) |
| Proportion of vegetation composed of annual grasses on BLM rangelands | 9 (+2/-2) | 10 (+2/-2) | 15 (+3/-3) | 17 (+3/-3) | 20 (+3/-3) | 21 (+4/-4) |
| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 53 (+7/-7) | 60 (+5/-5) | 66 (+7/-7) | 70 (+7-7) | 72 (+6/-6) | 70 (+8/-8) |

**Table 2.** Summary of Eleven Indicators for Type II (BLM lands outside sage-grouse habitat) between 2013 and 2018

| Type II | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 14% (+7/-7) | 7% (+2/-2) | 4% (+3/-3) | 6% (+4/-4) | 9% (+6/-6) | 9% (+5/-5) |
| Mean sagebrush species height in inches on BLM rangelands | 26.78 (+3.08/-3.08) | 20.82 (+3.9/-3.9) | 26.73 (+6.92/-6.91) | 22.38 (+3.6/-3.6) | 25.78 (+2.32/-2.32) | 18.48 (+3.01/-3.0) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 35 (+22/-22) | 39 (+16/-16) | 22 (+20/-20) | 60 (+12/-12) | 50 (+16/-16) | 45 (+16/-16) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 65 (+22/-22) | 61 (+16/-16) | 78 (+20/-20) | 40 (+12/-12) | 50 (+16/-16) | 55 (+16/-16) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 24% (+9/-9) | 36% (+9/-9) | 39% (+10/-10) | 27% (+9/-9) | 23% (+7/-7) | 34% (+12/-12) |
| Mean herbaceous plant species height in inches on BLM rangelands | 8.74 (+2.33/-2.33) | 10.01 (+1.79/-1.79) | 13.82 (+2.81/-2.81) | 11.81 (+1.84/-1.85) | 13.42 (+1.32/-1.32) | 12.42 (+1.98/-1.97) |

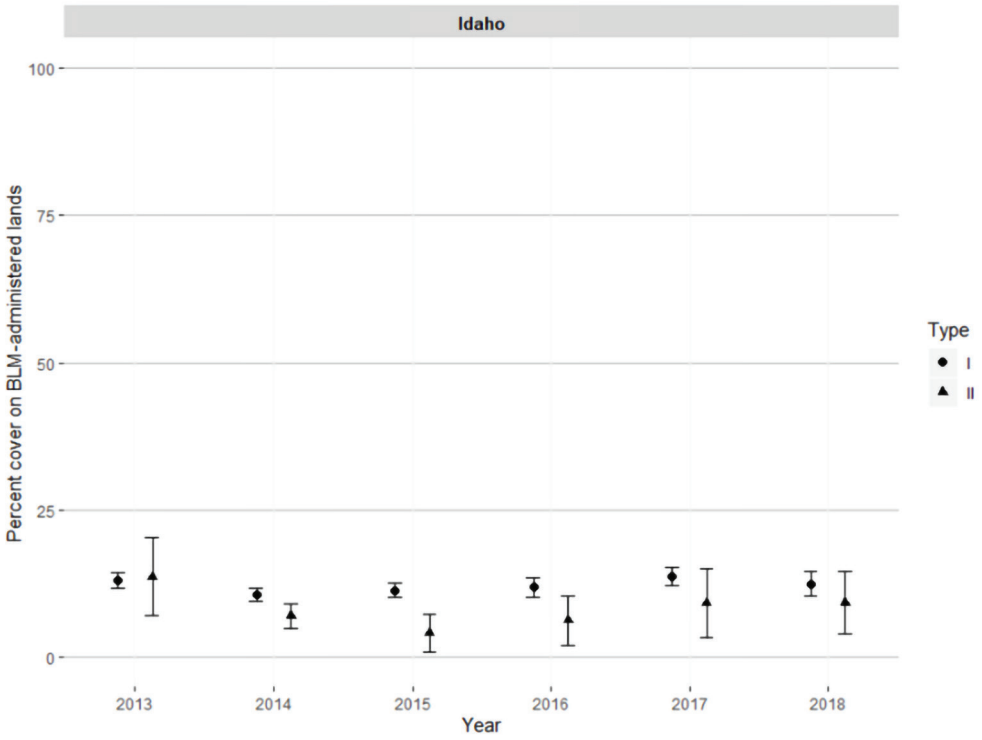



**Figure 3.** Indicator 1: Percent foliar cover of sagebrush across type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

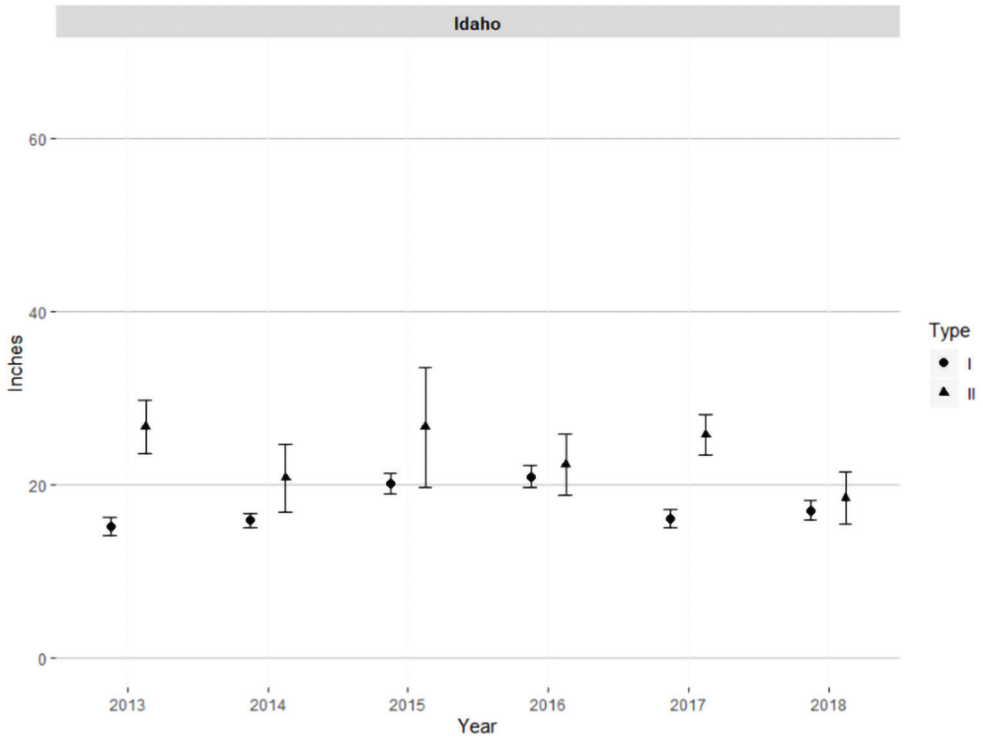



**Figure 4.** Indicator 2: Mean sagebrush species height in inches on BLM rangelands across type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

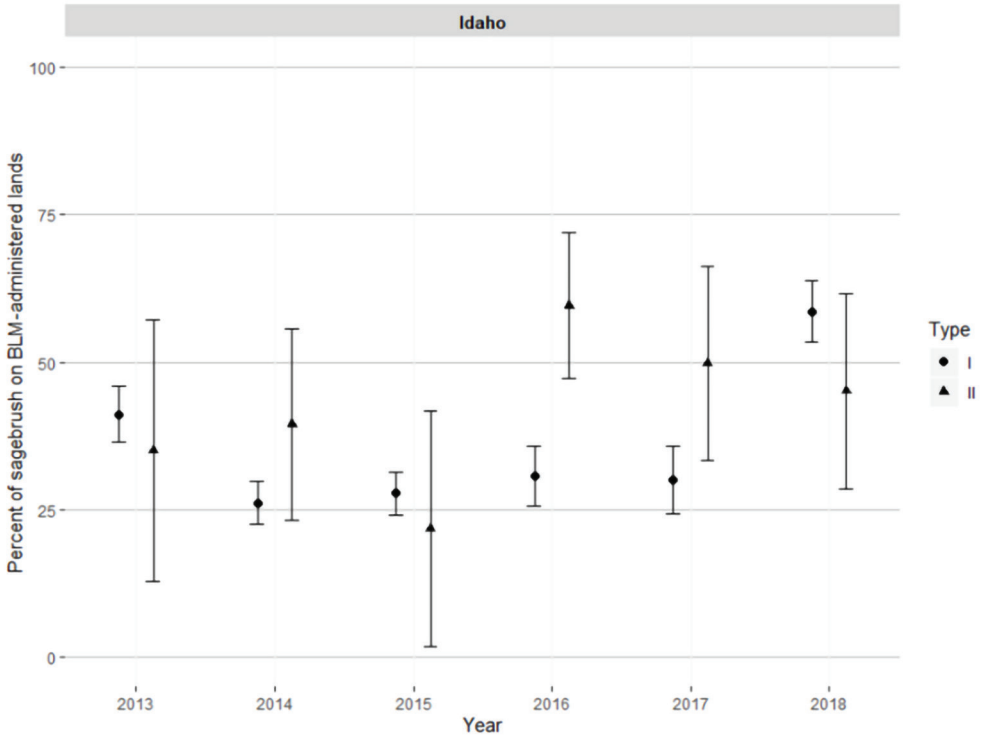



**Figure 5.** Indicator 3: Proportion of sagebrush that is columnar shaped on BLM rangelands across type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

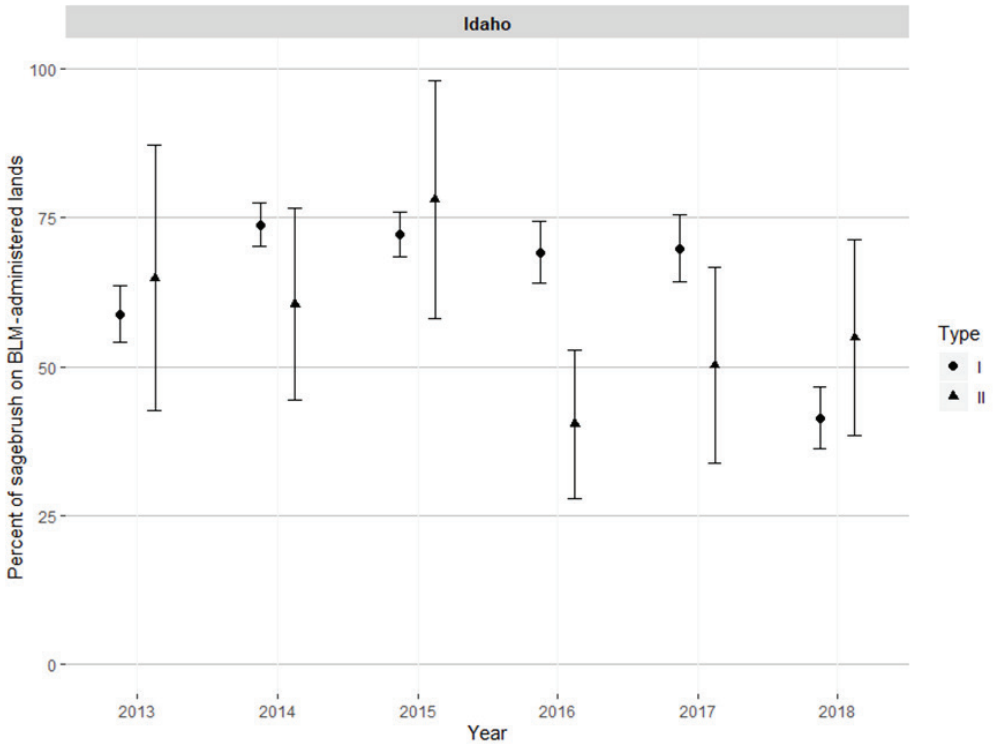



**Figure 6.** Indicator 4: Proportion of sagebrush that is spreading shaped on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

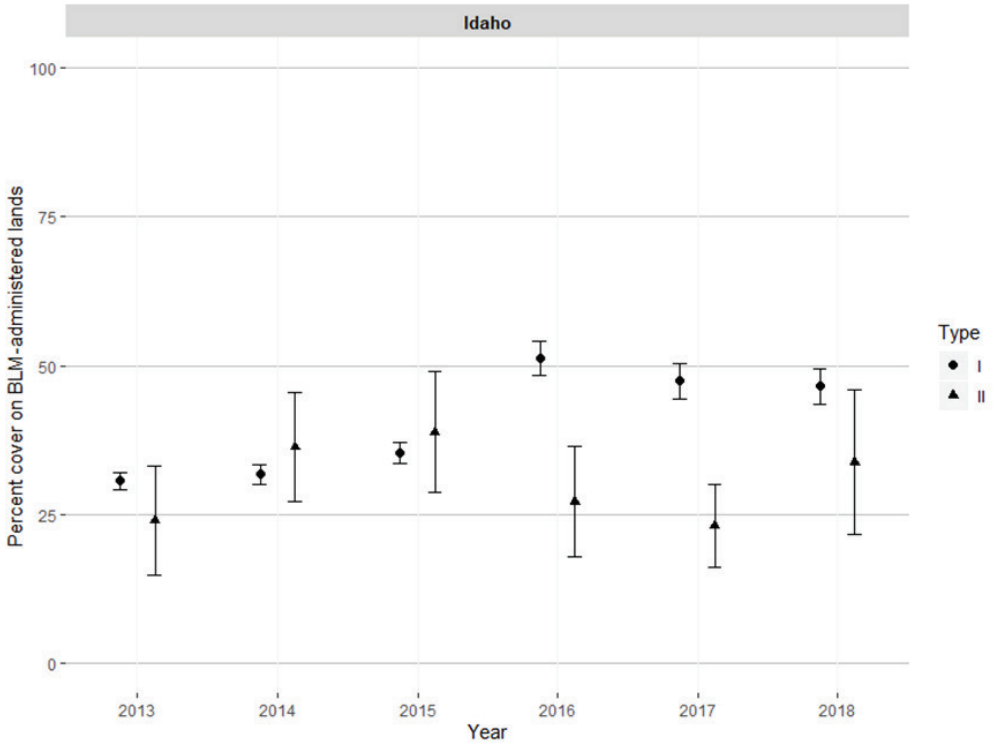



**Figure 7.** Indicator 5: Percent cover of perennial grasses and perennial forbs on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

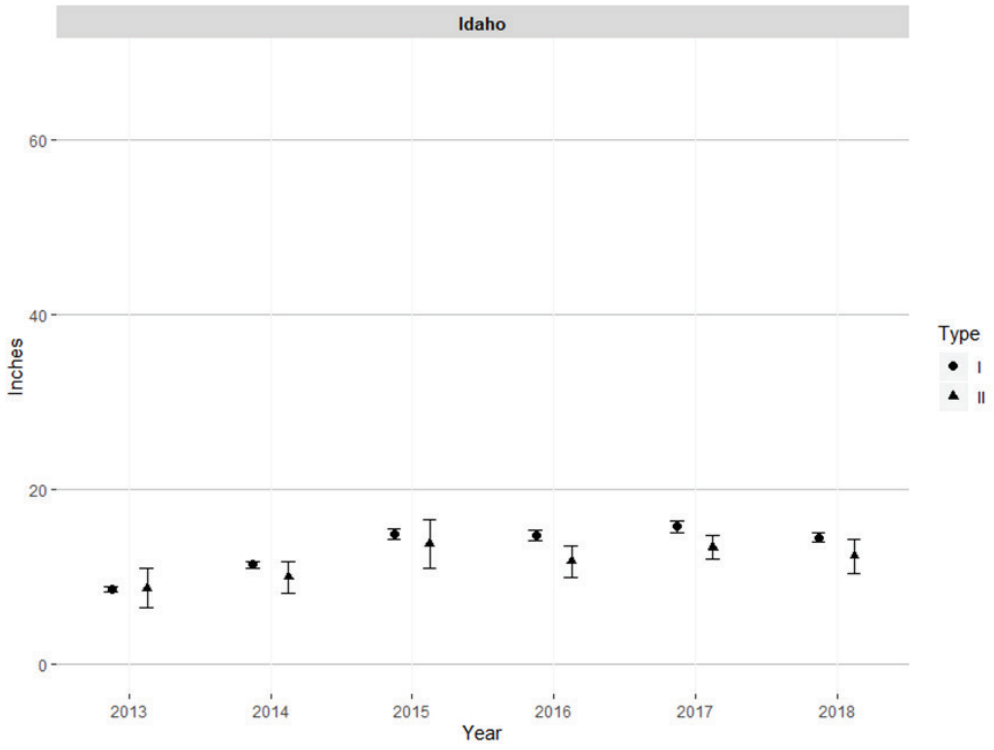



**Figure 8.** Indicator 6: Mean herbaceous plant species height in inches on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

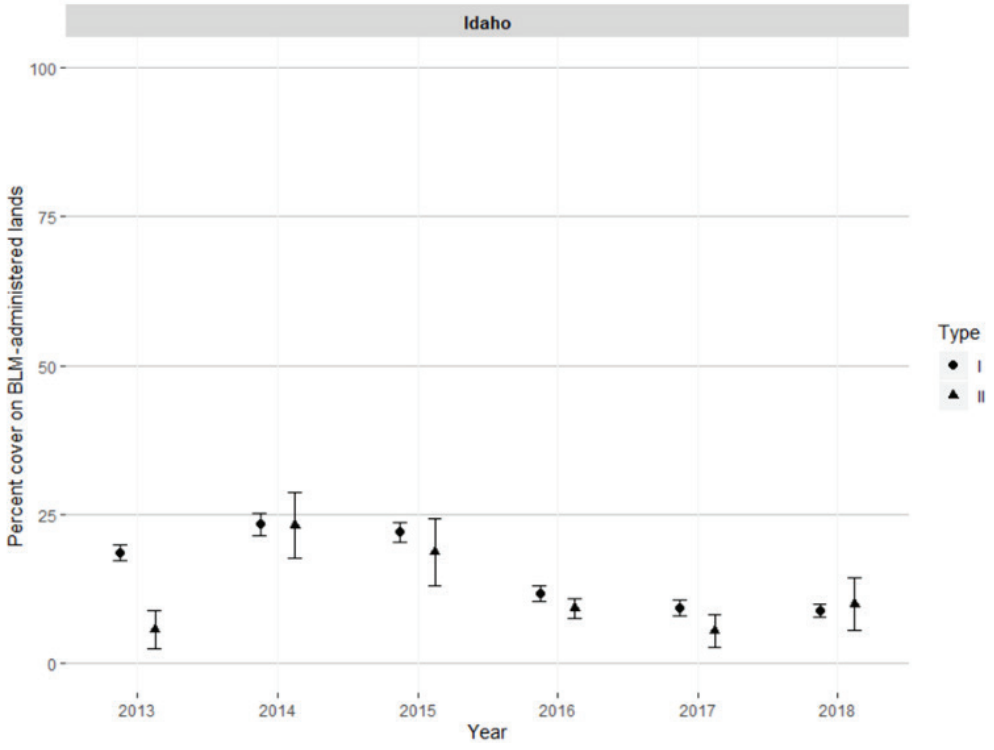



**Figure 9.** Indicator 7: Percent cover of bare ground on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

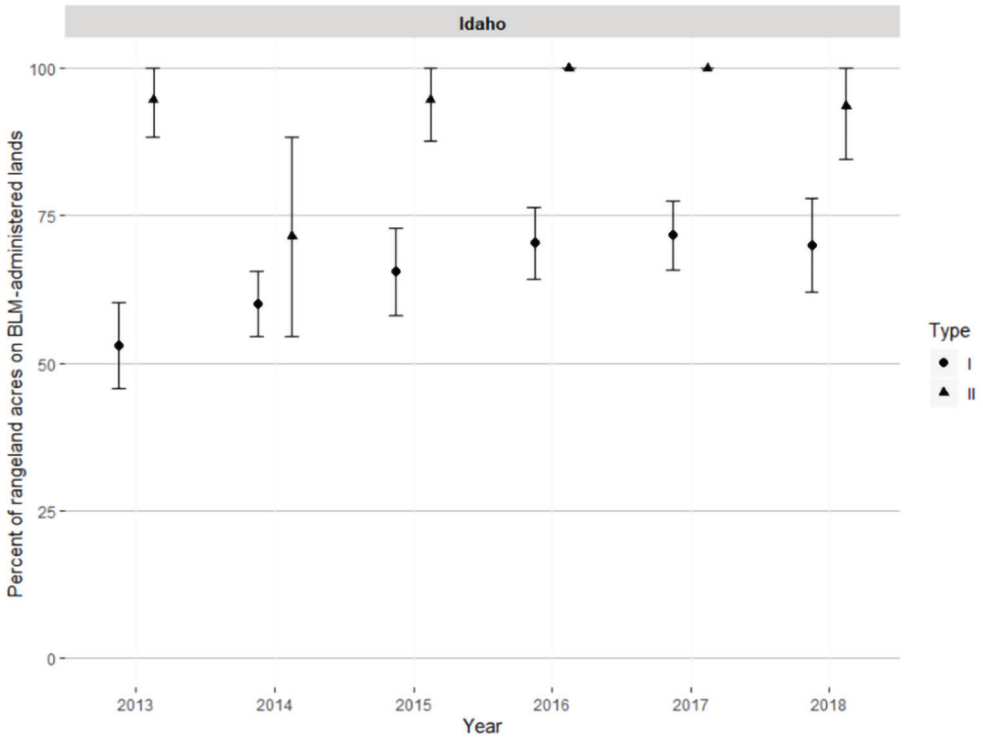



**Figure 10.** Indicator 8: Proportion of BLM rangelands with nonnative invasive species present in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

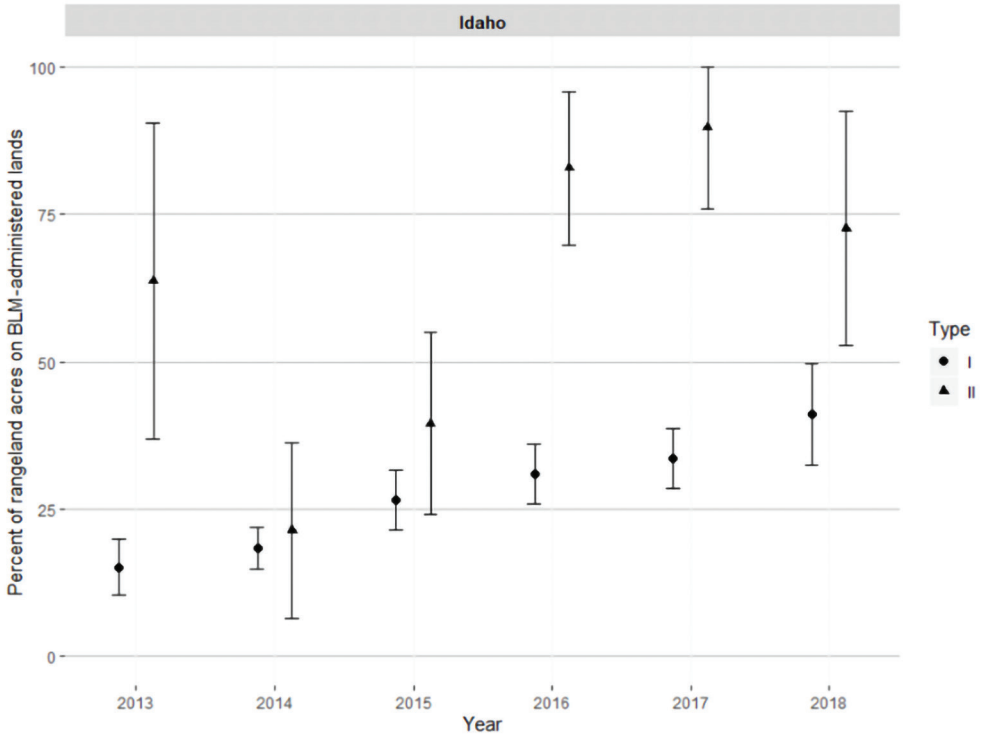



**Figure 11**. Indicator 9: Proportion of BLM rangelands where >=25% of foliar cover is comprised of nonnative invasive species present in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

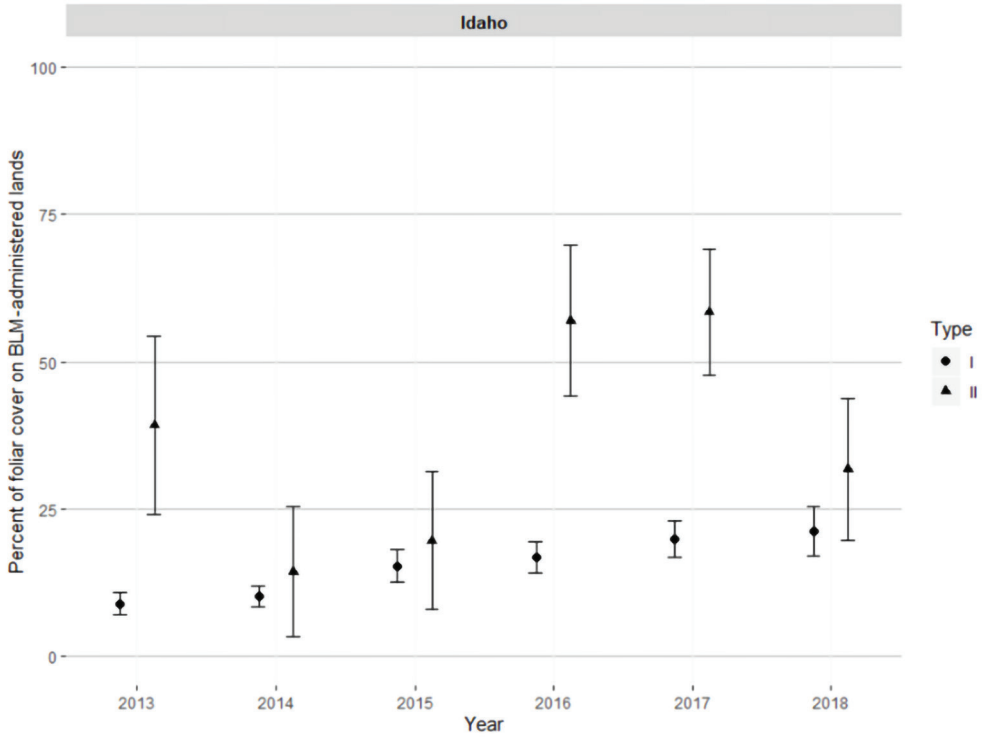



**Figure 12**. Indicator 10: Proportion of vegetation composed of annual grasses on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

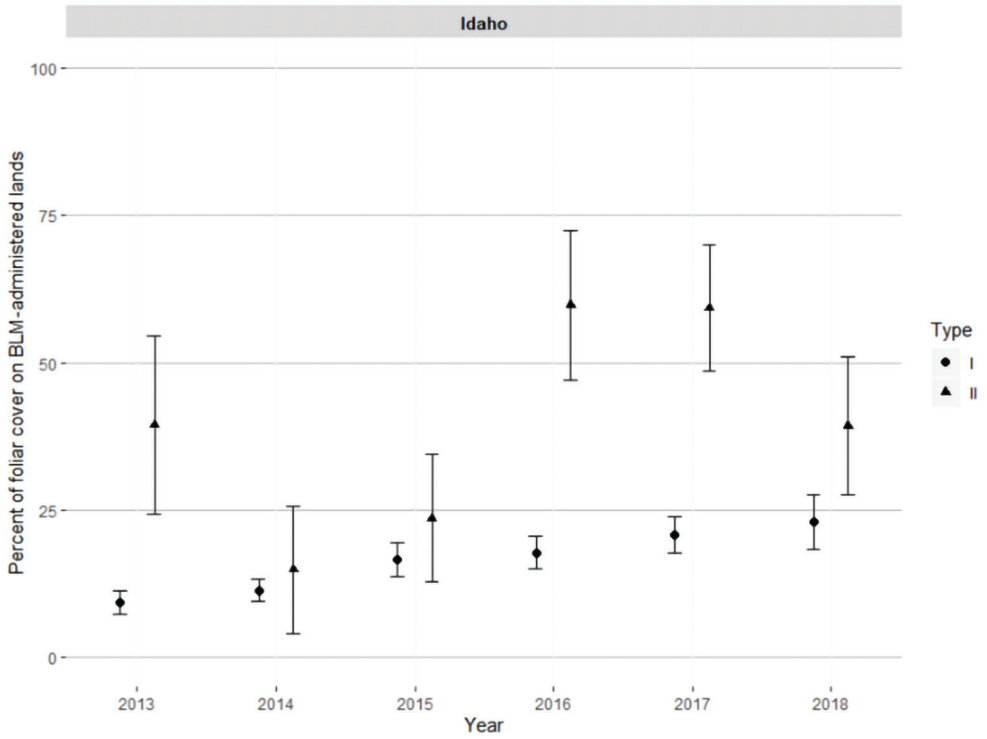



**Figure 13.** Indicator 11: Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands in type I (BLM lands within sage-grouse habitat) and type II (BLM lands outside of sage-grouse habitat) within Idaho (80% confidence interval).

## 1.2. Habitat conditions within seasonal habitat areas

The summaries below reflect data collected within Idaho sage-grouse habitat in Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment[1] between 2013 through 2019. The summaries count and categorize Idaho monitoring locations as meeting, not meeting, or data not collected, for each of the quantifiable indicators found in the Habitat Objectives table of the Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment. The indicator values shown in the Habitat Objectives Table (table 2-2) describe the desired conditions across the broad landscape based on best available science at the time of publication of the Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment regarding Greater Sage-Grouse (GRSG) habitat use.

Collectively, the vegetation indicators for sagebrush (cover, height, and shape), perennial grasses, perennial forbs (cover, height, and/or availability), and others found in the Habitat Objectives Table represent the vegetation components associated with each seasonal habitat area. Not all locations within a given seasonal habitat area will be able to achieve the indicator values in the Habitat Objectives Table due to the inherent variation in vegetation communities and ecological site potential as well as environmental factors such as drought or fire. Monitoring locations where one or more objectives are not met may or may not be providing suitable sage-grouse seasonal habitat; these summaries do not include an interpretation of the site-scale metrics which collectively inform habitat suitability. Habitat suitability is appropriately evaluated through the processes outlined in the **Sage-Grouse Habitat Assessment Framework** and supplemental training materials developed by the BLM. These include guidance on the interpretation of these data (i.e., indicator values) and other information collected within GRSG habitat. Finally, the data aggregated for this summary represent many different sample designs with various sample intensities and monitoring objectives; thus, they may not reliably represent conditions in all locations.

[1] This monitoring report summarizes information for Idaho. It does not include Southwest Montana. Appendix 10 will summarize the information for Southwestern Montana.

### 1.2.1. Idaho Habitat Objectives Summary Table

**Table 3.** Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Nesting Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 15-25% | 141 | 28 | 369 | 72 | 0 | 0 | 510 | 100 |
| Perennial Grass Cover | Arid: ≥10% | 254 | 93 | 19 | 7 | 0 | 0 | 273 | 100 |
| | Mesic: ≥15% | 225 | 95 | 12 | 5 | 0 | 0 | 237 | 100 |
| Perennial Forb Cover | Arid: ≥5% | 108 | 40 | 165 | 60 | 0 | 0 | 273 | 100 |
| | Mesic: ≥10% | 83 | 35 | 154 | 65 | 0 | 0 | 237 | 100 |
| Sagebrush Height | Arid: 12-31 in (30-80 cm) | 146 | 53 | 57 | 21 | 70 | 26 | 273 | 100 |
| | Mesic: 16-31 in (40- 80 cm) | 89 | 38 | 118 | 50 | 30 | 13 | 237 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | >7 in (18 cm) | 442 | 87 | 33 | 6 | 35 | 7 | 510 | 100 |

**Table 3** *(continued)*. Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Nesting Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| IHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 15-25% | 50 | 19 | 217 | 81 | 0 | 0 | 267 | 100 |
| Perennial Grass Cover | Arid: ≥10% | 172 | 91 | 18 | 9 | 0 | 0 | 190 | 100 |
| | Mesic: ≥15% | 69 | 90 | 8 | 10 | 0 | 0 | 77 | 100 |
| Perennial Forb Cover | Arid: ≥5% | 38 | 20 | 152 | 80 | 0 | 0 | 190 | 100 |
| | Mesic: ≥10% | 29 | 38 | 48 | 62 | 0 | 0 | 77 | 100 |
| Sagebrush Height | Arid: 12-31 in (30-80 cm) | 89 | 47 | 41 | 22 | 60 | 32 | 190 | 100 |
| | Mesic: 16-31 in (16-31 cm) | 23 | 30 | 41 | 53 | 13 | 17 | 77 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | >7 in (18 cm) | 228 | 85 | 27 | 10 | 12 | 4 | 267 | 100 |

**Table 3** *(continued)*. Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Nesting Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 15-25% | 15 | 21 | 57 | 79 | 0 | 0 | 72 | 100 |
| Perennial Grass Cover | Arid: ≥10% | 39 | 81 | 9 | 19 | 0 | 0 | 48 | 100 |
| | Mesic: ≥15% | 19 | 79 | 5 | 21 | 0 | 0 | 24 | 100 |
| Perennial Forb Cover | Arid: ≥5% | 7 | 15 | 41 | 85 | 0 | 0 | 48 | 100 |
| | Mesic: ≥10% | 5 | 21 | 19 | 79 | 0 | 0 | 24 | 100 |
| Sagebrush Height | Arid: 12-31 in (30-80 cm) | 24 | 50 | 7 | 15 | 17 | 35 | 48 | 100 |
| | Mesic: 16-31 in (16-31 cm) | 6 | 25 | 11 | 46 | 7 | 29 | 24 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | >7 in (18 cm) | 54 | 75 | 11 | 15 | 7 | 10 | 72 | 100 |

**Table 3** *(continued)*. Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[1]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 10-25% | 201 | 47 | 228 | 53 | 0 | 0 | 429 | 100 |
| Sagebrush Height | 16-32 inch (40-80 cm) | 163 | 38 | 184 | 43 | 82 | 19 | 429 | 100 |
| Perennial Grass and Forb cover | >15% | 400 | 93 | 29 | 7 | 0 | 0 | 429 | 100 |
| Riparian and/or Meadow Habitat Condition | PFC Lotic | 90 | 74 | 32 | 26 | NA | NA | 122 | 100 |
| | PFC Lentic | 12 | 48 | 13 | 52 | NA | NA | 25 | 100 |
| **IHMA** | | | | | | | | | |
| Sagebrush Cover | 10-25% | 98 | 36 | 178 | 64 | 0 | 0 | 276 | 100 |
| Sagebrush Height | 16-32 in (40-80 cm) | 99 | 36 | 115 | 42 | 62 | 22 | 276 | 100 |
| Perennial Grass and Forb cover | >15% | 262 | 95 | 14 | 5 | 0 | 0 | 276 | 100 |
| Riparian and/or Meadow Habitat Condition | PFC Lotic | 22 | 65 | 12 | 35 | NA | NA | 34 | 100 |
| | PFC Lentic | 2 | 33 | 4 | 67 | NA | NA | 6 | 100 |

**Table 3** *(continued)*. Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 10-25% | 24 | 27 | 66 | 73 | 0 | 0 | 90 | 100 |
| Sagebrush Height | 16-32 in (40-80 cm) | 25 | 28 | 28 | 31 | 37 | 41 | 90 | 100 |
| Perennial Grass and Forb cover | >15% | 77 | 86 | 13 | 14 | 0 | 0 | 90 | 100 |
| Riparian and/or Meadow Habitat Condition | PFC Lotic | 0 | 0 | 0 | 0 | NA | NA | 0 | 0 |
| | PFC Lentic | 0 | 0 | 0 | 0 | NA | NA | 0 | 0 |

**Table 3** *(continued)*. Summary of Idaho Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[1]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | >10% | 568 | 60 | 375 | 40 | 0 | 0 | 943 | 100 |
| Sagebrush Height | 10 in (25 cm) above snow | 388 | 41 | 373 | 40 | 182 | 19 | 943 | 100 |
| **IHMA** | | | | | | | | | |
| Sagebrush Cover | >10% | 252 | 47 | 280 | 53 | 0 | 0 | 532 | 100 |
| Sagebrush Height | 10 in (25 cm) above snow | 243 | 46 | 161 | 30 | 128 | 24 | 532 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | >10 % | 60 | 33 | 121 | 67 | 0 | 0 | 181 | 100 |
| Sagebrush Height | 10 in (25 cm) above snow | 76 | 42 | 35 | 19 | 70 | 39 | 181 | 100 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., no sagebrush height because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance (e.g., no sagebrush height because sagebrush was sparse enough that it was never encountered where heights were measured).

## 1.3. Habitat trigger summary

**Table 4.** Summary of Idaho Habitat Triggers

| Year | Number and Location of Soft Habitat Triggers Tripped | Number and Location of Hard Habitat Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | 0 soft habitat triggers | 1 hard habitat trigger tripped in the West Owyhee IHMA | Lost 21.1% of key habitat within the West Owyhee IHMA primarily due to the Soda Fire (132,255 acres within IHMA; 36,535 acres within PHMA, and ~10,000 acres within GHMA). |
| **2016** | 0 soft habitat triggers | 1 hard habitat trigger remains tripped in the West Owyhee IHMA | Hard habitat trigger within the West Owyhee IHMA remains tripped until the baseline conditions are met. |
| **2017** | 0 soft habitat triggers | 1 hard habitat trigger remains tripped in the West Owyhee IHMA | Hard habitat trigger within the West Owyhee IHMA remains tripped until the baseline conditions are met. |
| **2018** | 1 habitat soft trigger tripped in the Mountain Valleys IHMA | 1 hard habitat trigger remains tripped in the West Owyhee IHMA | Hard habitat trigger within the West Owyhee IHMA remains tripped until the baseline conditions are met. Soft habitat trigger tripped due to the loss of 13,000 acres of habitat in 2018 Grassy Ridge Fire. |
| **2019** | 1 habitat soft trigger tripped in the Mountain Valleys IHMA | 1 hard habitat trigger remains tripped in the West Owyhee IHMA | Hard habitat trigger within the West Owyhee IHMA remains tripped until the baseline conditions are met. Soft habitat trigger tripped due to the loss of 13,000 acres of habitat in 2018 Grassy Ridge Fire. |

## 2. Land Health Standards Evaluations

### 2.1. Category A rangelands

**Table 5.** Category A. These rangelands are meeting all standards or making significant progress toward meeting the standard.

| State – Year - Category | BLM Acres in Assessed Allotments |
|---|---|
| ID – 2015 – Category A Rangelands | 37,357 |
| ID – 2016 – Category A Rangelands | 75,945 |
| ID – 2017 – Category A Rangelands | 71,678 |
| ID – 2018 – Category A Rangelands | 95,669 |

### 2.2. Category B rangelands

**Table 6.** Category B. These rangelands are not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (current livestock grazing is a significant factor).

| State – Year - Category | BLM Acres in Assessed Allotments |
|---|---|
| ID – 2015 – Category B Rangelands | 8,203 |

## 3. Surface Disturbance in PHMA and IHMA

The result of tracking the number of BLM authorizations and acres disturbed per LUP Decision or Program Area disturbance type in total since 2015 are displayed in the following table. Idaho State Office authorized 16 surface disturbing activities in PHMA and IHMA resulting in a total of 1260 acres of disturbance in compliance with the land use plan disturbance cap.

**Table 7.** Summary of Surface Disturbance Activities within PHMA and IHMA

| Decision/Program Area | Count of Authorizations in PHMA/IHMA | Total Acres of Authorizations in PHMA/IHMA |
|---|---|---|
| Coal Leasing | 0 | 0 |
| Fluid Mineral Leasing (O&G) | 0 | 0 |
| Geothermal Energy | 0 | 0 |
| Locatable Minerals | 0 | 0 |
| Nonenergy Leasable Minerals | 0 | 0 |
| Rights-of-Way | 5 | 50.73 |
| Salable - Mineral Materials Disposals | 0 | 0 |
| Solar Energy | 0 | 0 |
| Trails & Travel Management | 2 | 93.34 |
| Utility Corridors | 8 | 1113.00 |
| Wind Energy | 0 | 0 |
| Water Facility | 1 | 0.70 |
| **TOTALS** | **16** | **~1260.00** |

# 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

## 4.1. Population trigger summary by year

**Table 8.** Summary of Population Triggers Tripped in Idaho by Year and Location with the Causal Factor

| Year | Number and Location of Soft Population Triggers Tripped | Number and Location of Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | 0 soft population triggers were tripped | 0 hard population triggers were tripped | |
| **2016** | 0 soft population triggers were tripped | 0 hard population triggers were tripped | |
| **2017** | 0 soft population triggers were tripped | 0 hard population triggers were tripped | |
| **2018** | 1 soft population trigger was tripped in Desert PHMA | 2 hard population triggers were tripped in Mountain Valleys and Desert IHMA | Analysis is in progress with Idaho Fish and Game |
| **2019** | 1 soft population trigger was tripped in Mountain Valleys PHMA | 4 hard population triggers were tripped in Desert PHMA, Desert IHMA, Mountain Valleys PHMA, and Southern IHMA | Analysis is in progress with Idaho Fish and Game |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data as described above. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the land use plan Habitat Objectives Table by seasonal habitat. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM nor are they achievable on every acre (e.g., due to ecological site potential) of designated sage-grouse Habitat Management Areas across the landscape that BLM manages. The indicators do, however, provide a suite of habitat characteristics that helps inform BLM when developing and implementing management decisions and projects within sage-grouse habitat.

   For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. BLM policy directs the field to use the data collected for these habitat indicators as a whole when assessing suitability of sage-grouse habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) are then used during land health evaluations and NEPA analyses in authorization processes.

   The Habitat Objectives Table(s) in the SG land use plan describes overall desired conditions through a set of indicators and associated benchmarks for sage-grouse seasonal habitats within the planning area.

   ***Nesting and Early Brood-Rearing Seasonal Habitat***
   Nesting/early brood-rearing seasonal habitat includes five quantitative indicators: sagebrush cover, sagebrush height, perennial grass cover, perennial grass and forb height, and perennial forb cover. Within PHMA, IHMA, and GHMA, sagebrush cover is not within the desired range of 15-25% on a majority of the sites. In PHMA, 72% of the monitoring locations were not meeting the benchmark. Similarly, sagebrush cover was not meeting the benchmark in IHMA (81%) and GHMA (79%). Sagebrush height (30-80 cm) within PHMA is within the desired condition when combining arid and mesic sites 46% of the time, not meeting 34% of the time, and the indicator was not measured on 20% of the plots. Sagebrush height had similar results within IHMA and GHMA both meeting 42% of the time. Although sagebrush cover and height are not within the desired condition, this does not necessarily mean these locations are unsuitable. These monitoring locations could have either low ecological site potential for sagebrush cover and height, or the measured sagebrush cover and height values could be slightly above or below the desired condition. These aspects will be further analyzed within a final HAF report.

   For PHMA, IHMA, and GHMA the perennial grass cover and perennial grass and forb height for nesting and brood-rearing habitat are meeting the desired conditions for most locations. Perennial grass cover is meeting at ≥90% of the total locations monitored within PHMA and IHMA. GHMA is meeting at ≥80% of the total locations. Perennial grass and forb height are also meeting at approximately ≥85% of all locations within PHMA and IHMA and at ≥75% within GHMA. Perennial forb cover is not being met

at a majority of locations: PHMA (63%), IHMA (75%), and GHMA (83%) when combining both arid and mesic sites together. Perennial forb cover is highly variable between years because it is dependent on the timing of spring precipitation and associated temperatures. The high variability that is outside management control makes it a difficult indicator to meet depending on annual variability.

***Late Brood-Rearing and Summer Seasonal Habitat***

Late brood-rearing/summer seasonal habitat contains five quantitative indicators: sagebrush cover, sagebrush height, perennial grass and forb cover, and riparian and meadow habitat condition. Like with nesting/early brood-rearing habitat, sagebrush cover and height indicators are not being met. Sagebrush cover is within the desired range on 47% of plots within PHMA, 36% of plots within IHMA, and 27% of plots within GHMA. Sagebrush height is being met ≥46% of the plots within all three habitat management areas. And perennial grass and forb cover is being met between 85-93% of the plots within the habitat management areas. The fifth indicator, riparian and meadow habitat condition, is summarized here by count to be consistent with the other indicators. This may not be the best way to summarize this data because not all stream reaches or meadows are created equal in size and potential. Additionally, these counts only reflect the data that has been included within the National Proper Functioning Condition (PFC) Database. With that said, 74% and 65% of the lotic (stream) areas within PHMA and IHMA respectfully are properly functioning or functioning at risk with an upward trend. Additionally, 48% and 33% of the lentic (riparian/wetland/meadow) areas within PHMA and IHMA respectfully are properly functioning or functioning at risk. The proportion of sites meeting using miles for lotic areas would be 85% (PHMA) and 77% (IHMA). The proportion of sites meeting use acres for lentic areas would be 57% for both PHMA and IHMA. No lotic or lentic information was found in the National PFC Database for reaches or sites within GHMA.

***Winter Seasonal Habitat***

Winter seasonal habitat includes two quantitative indicators: sagebrush cover and sagebrush height above snow. Sagebrush cover is being met on 60%, 47%, and 33% respectfully for PHMA, IHMA, and GHMA. Sagebrush height above snow is meeting on 41%, 46%, and 42% respectfully for PHMA, IHMA, and GHMA.

***Seasonal Habitat Discussion***

Summaries of 11 indicators relevant to sage-grouse habitat were derived from BLM Landscape Monitoring Framework (LMF) data collected between 2013 and 2018 within and outside sage-grouse habitat. These summaries are weighted estimates representing the area sampled. General trends can be determined from these summaries. Sagebrush cover and height within and outside sage-grouse habitat were static between 2013 and 2018. Grass and forb cover and height were slightly increasing between 2013 and 2018. Cover of bare ground was decreasing between 2013 and 2018. There were less nonnative invasive species within sage grouse habitat than outside habitat, but the amount of nonnative invasive species was slowing increasing within sage grouse habitat. Causal factors as to why these changes have occurred have not been analyzed. These will be analyzed as part of habitat assessments and land health evaluations.

The 2015 Idaho and Southwestern Montana ARMPA[2] included objectives for the percent of the area that would meet the vegetation characteristics and/or habitat characteristics (pick one) for each of the seasonal use areas. The summary of data included in the report is a plot summary and does not include an estimate of the amount of seasonal habitat that meets the desired conditions for vegetative and habitat

[2] This monitoring report summarizes information for Idaho. It does not include Southwest Montana. Appendix 10 will summarize the information for Southwestern Montana.

characteristics. This can be done when the data is evaluated with an interdisciplinary team following the process outlined in the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance. Site scale assessments evaluate the indicators collectively to determine suitability of seasonal habitat condition across biologically relevant areas, where possible.

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/ or are not a manageable component of the plant community. In some cases, past management history, drought, etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within either seasonal habitats or habitat management areas may fall on these inclusions of nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results from the data for each habitat objectives do not represent the landscape as a whole. Rather, the results are solely based on the percentage of monitoring plots across the HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential.

Interpretation of the data is beyond the scope of this monitoring summary report. A mosaic of vegetation communities and ecological sites occurs across the range of sage-grouse and spatial data used to delineate habitats (seasonal and/or HMAs) to cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs.

The data presented in the results section indicate that one hard habitat trigger was tripped in West Owyhee IHMA since 2015 as a result of the Soda Fire burning ~185,000 acres. One soft habitat trigger was also tripped in 2018 in the Mountain Valleys IHMA as a result of the Grassy Ridge Fire burning 13,000 acres. These triggers remain tripped until baseline conditions are met. Adaptive management responses have been applied as outlined in the land use plan.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   Of the 1,275 allotments administered by Idaho that contain sage-grouse habitat, 280,649 BLM acres are meeting, or making progress towards meeting, the land health standards and 8,203 BLM acres are not meeting, grazing was the casual factor and management has changed. This data only partially answers the question by describing the final evaluation of the land health standards in their entirety and does not specify the results of the SSS/Wildlife standard within the group of standards. Not reporting about Category C and D allotments. Category C allotments are rangelands not meeting all standards or making significant progress toward meeting the standards, and no appropriate action has been taken to ensure significant progress toward meeting the standards (livestock is a significant factor). Category D allotments are rangelands not meeting all standards or making significant progress toward meeting the standards due to causes other than livestock grazing.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   The monitoring and disturbance data presented in the results section of this report indicates that the amount of disturbance within the planning area has remained under the disturbance caps at the project level and BSU scales as described in the land use plan. The BLM monitoring data displayed in this report indicates that approximately 1,260 acres of new surface ground disturbance has been authorized in Idaho since 2015

Sage-Grouse ARMPA was signed. This amount of disturbance within the planning area remains under the 3% cap set forth in the land use plan.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The data presented in the results section indicate that for sage-grouse populations in Idaho since 2015, one soft population trigger was tripped in Desert PHMA and 2 hard triggers were tripped in Mountain Valleys and Desert IHMA in 2018. Additionally, in 2019, one soft population trigger was tripped in Mountain Valleys PHMA and 4 hard triggers were tripped in Desert PHMA, Desert IHMA, Mountain Valleys PHMA, and Southern IHMA. The tripping of these soft and hard population triggers indicate population declines within these five conservation areas (Desert PHMA, Desert IHMA, Mountain Valleys PHMA, Mountain Valleys IHMA, and Southern IHMA). The remaining conservation areas (Southern PHMA, West Owyhee PHMA, and West Owyhee IHMA) have stable populations.

In conclusion, this BLM Idaho GRSG 5-Year Monitoring Report provides results of implementation monitoring of the 2015 land use plan decisions rather than assessing effectiveness of the conservation measures in the plan. This summary of the monitoring data should be considered a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 10: Montana/Dakotas State Office Monitoring Report for the 2015 Montana, North Dakota, and South Dakota Land Use Plan Amendments and Revisions

2015–2020

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# Appendix 10: Montana/Dakotas State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 10: Montana/Dakotas State Office Monitoring Report for the 2015 Montana, North Dakota, and South Dakota Land Use Plan Amendments and Revisions

## 2015–2020

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# Introduction

This BLM Montana/Dakotas State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (sage-grouse) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Monitoring Report). This appendix describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures from Land Use Plan (LUP) revisions and amendments in Montana, North Dakota, and South Dakota covered by the 2015 GRSG Records of Decision (RODs). The BLM Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 planning-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG LUP amendments and revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (5 questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the Lewistown and ID/Southwest MT Resource Management Plans (RMP) amendments in Montana, the Miles City, HiLine, and Billings RMP revisions in Montana; the North Dakota RMP Amendment; and the South Dakota RMP Revision; and answers the following four questions:

1. Are the plans meeting the sage-grouse habitat objectives?
2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

BLM Montana/Dakotas monitored four factors (one factor per monitoring question) in LUP-designated sage-grouse habitat management areas within the RMP amendments and revisions in Montana, North Dakota, and South Dakota:

- Habitat conditions, as described in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)
- Land Health Standards evaluations
- Surface disturbance in Priority Habitat Management Area (PHMA) and
- Greater Sage-grouse population trends (in coordination with the state wildlife agency).

BLM Montana/Dakotas used the following methods for the four factors.

# 1. Habitat Conditions, as Articulated in the Habitat Objectives Tables and Adaptive Management Habitat Triggers

## 1.1. Habitat conditions statewide

The BLM National Operations Center (NOC) provided summaries of 11 indicators of importance to sage-grouse rangewide generated within sage-grouse habitat (type I) and outside of sage-grouse habitat (type II) on BLM lands in Montana, North Dakota, and South Dakota. These indicators are generally recognized as important components of sage-grouse habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Table. These indicators provide consistent contextual information about habitat conditions broadly within the states and are presented in all appendices to the Rangewide Monitoring report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 — **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Habitat conditions within seasonal habitats

In addition, BLM Montana/Dakotas produced summaries of LMF and field-office collected AIM data to evaluate how frequently quantitative habitat objectives, as detailed in each LUP Habitat Objectives Table, were met within seasonal habitats within Habitat Management Areas. Montana/Dakotas does not have seasonal habitat area delineated in any of the LUP areas, so the sampling date was used to group plots in Habitat Management Areas. Each summary reflects the measures collected within the seasonal use period identified in the Habitat Objectives Table. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. They are not weighted to represent to the overall area sampled and plot locations may not be representative of seasonal use areas when sorted by date.

## 1.3. Habitat conditions

Adaptive Management Habitat Triggers: Hard triggers are indicators that management is not achieving desired conservation results. Hard triggers are considered a catastrophic indicator that the species is not responding to conservation action, or that a larger-scale impact is having a negative effect. In Montana and South Dakota hard triggers are focused on three metrics: 1) number of active leks, 2) acres of available habitat, and 3) population trends based on annual lek counts. Hard and soft triggers have not been developed for North Dakota.

Within the context of normal population variables, hard triggers shall be determined to take effect when two of the three metrics exceeds 60% of normal variability for the Biologically Significant Unit (BSU) in a single year, or when any of the three metrics exceeds 40% of normal variability for a 3-year period within a 5-year range of analysis. A minimum of 3 years is used to determine trends, with a 5-year period preferred to allow determination of three actual time periods (Y1-2-3, Y2-3-4, Y3-4-5).

Sage-grouse habitat measures are evaluated by the BLM NOC based on the amount of disturbance that occurs within BSUs. The amount of disturbance (which equates to the amount of habitat lost) was subtracted from the amount of available habitat to determine the loss percentage.

*Note that these methods apply to this specific BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the BSU scale.*

## 2. Land Health Standards (LHS) Evaluations

The NOC summarized LHS data for allotments that contain any sage grouse habitat in the planning area. Data are summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in two categories:

### 2.1. BLM acres of Category A allotments that contain sage-grouse habitat

All LHS are achieved or significant progress toward achieving is being made.

### 2.2. BLM acres of Category B allotments that contain sage-grouse habitat

These are not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress towards achieving LHS.

## 3. Surface Disturbance in Priority Habitat Management Area (PHMA)

The Montana Greater Sage Grouse Stewardship Act and Montana Executive Order 12-2015 together comprise the Montana Sage Grouse Conservation Strategy (MSGCS or Strategy). This Strategy, which is implemented though the Montana Sage Grouse Habitat Conservation Program (MSGHCP or Program), includes an "all lands" approach for managing disturbance. Since its inception in 2016, the State's disturbance approach has been successfully analyzing projects across all ownerships. This led to the BLM's determination that the State Program (and Strategy) is operational, effective, and consistent with all BLM goals and objectives for sage-grouse conservation. Therefore in 2018, the BLM formally recognized that the State's approach for disturbance calculation and mitigation determination was adequate for BLM's needs and would be used for BLM authorizations and associated NEPA documents. More information on how disturbances are calculated and how the Program works with proponents to reduce disturbances can be found on the Program's website at: **https://sagegrouse.mt.gov/**.

BLM North Dakota and South Dakota are directed to use SDARTT to track disturbances. In addition, surface disturbance was calculated for this report by querying BLM's NEPA documents and filtering the results to include all mining and lands and realty projects from 2015 to present. Only authorizations that resulted in new surface disturbance were included in this report. Right-of-way renewals, authorizations for existing structures, use of existing roads, and maintenance within existing right-of-way's were not included.

*Note that the methods previously described apply at the project scale. The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.*

# 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agencies)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following LUP-defined methodology:

## 4.1. Population estimates

Montana Fish, Wildlife and Parks (FWP) holds the responsibility of monitoring sage-grouse populations in Montana. The methods and results presented here are taken from the FWP 2020 Population report.

FWP biologists work with federal and nongovernmental organization partners and volunteers to count the number of displaying males at lek sites across the state in spring of each year. Counts are conducted at leks 1 – 3 times within a season; however, all leks are not monitored in every year. Each lek is also categorized based on activity status, such as confirmed active or confirmed inactive, according to established definitions. These data are used to assess population trends for use in sage-grouse management decisions.

The BLM LUPs require an assessment of populations rather than an index of the population derived from raw lek counts of male sage-grouse. To achieve robust population estimates the BLM and FWP are working with Dr. Paul Lukacs, University of Montana, to estimate sage-grouse population numbers based on counts of displaying males at leks using N-mixture models. This modeling approach is a robust analytical method for estimating population size and trend over time for species like sage-grouse that congregate at discrete breeding sites and accounts for numerous sources of error and bias in raw lek counts. Although FWP maintains a database of male counts at leks that date back to 1952, only data from 2002 onward could be used with this modeling approach.

Two population estimates were completed for this report. The first was population estimated the sage grouse population in PHMA across the entire State. The second estimate was broken down by BSU. The leks within PHMA in Montana considered part of the Wyoming Basin and Powder River populations were combined with the Yellowstone population, as defined in the COT report (US Fish and Wildlife Service. 2013).

In North Dakota and South Dakota, the state wildlife agencies have the responsibility to monitor sage-grouse populations. Lek survey protocols are similar to those described for Montana and lek counts are shared with the BLM for use in management decisions. Unlike FWP, neither state report an estimated population size.

## 4.2. Number of active leks

In Montana, FWP maintains a spatial database of sage-grouse leks, summarized by activity status. Field staff are continually working to confirm and record new lek locations and update lek status. In 2018, FWP added a new status category, *Provisionally Active*, to alert the MSGHCP, the BLM, and industry proponents of newly discovered leks. Two survey years are required to meet the definition of a Confirmed Active lek; thus, without a Provisionally Active status option, there was a delay of over 1 year before resource agencies and industry were notified of newly discovered leks. Provisionally Active will be considered for conservation actions or evaluated under state or federal assessments, but the status is meant to be temporary. If data are not sufficient to meet the definition of Confirmed Active after a second year of surveys, a Provisionally Active lek will revert to Unconfirmed and would not be considered for conservation actions or evaluated under state or federal assessments. If data is sufficient in the second year of surveys, the lek will be classified as Confirmed Active.

In North Dakota and South Dakota, the state wildlife agencies have the responsibility to monitor populations. Lek survey protocols are similar to those described for FWP and results are shared with the BLM for use in management decisions. For South Dakota, the BLM Montana/Dakotas applied the FWP lek activity definitions for trigger analysis. The sage-grouse population in North Dakota is small with only a few active leks. North Dakota Game and Fish Department supplied the BLM with lek counts and number of active leks. Lek activity status is based on their professional opinion.

## 4.3. Population trigger summary

As mentioned above in 1.3, hard triggers are indicators that management is not achieving desired conservation results. In Montana and South Dakota, hard triggers will be considered a catastrophic indicator that the species is not responding to conservation actions, or that a large-scale impact is having a negative effect. Hard triggers are focused on 3 metrics: 1) number of active leks, 2) acres of available habitat, and 3) population trends based on annual lek counts. Hard and soft triggers were not established for North Dakota.

Within the context of normal population variables, hard triggers shall be determined to take effect when two of the three metrics exceed 60% of normal variability for the BSU in a single year, or when any of the three metrics exceeds 40% of normal variability for a 3-year period within a 5-year range of analysis. A minimum of 3 years is used to determine trends, with a 5-year period preferred to allow determination of three actual time periods (Y1-2-3, Y2-3-4, Y3-4-5). Baseline population estimates are established by pre-disturbance surveys, reference surveys and account for regional and statewide trends in population levels.

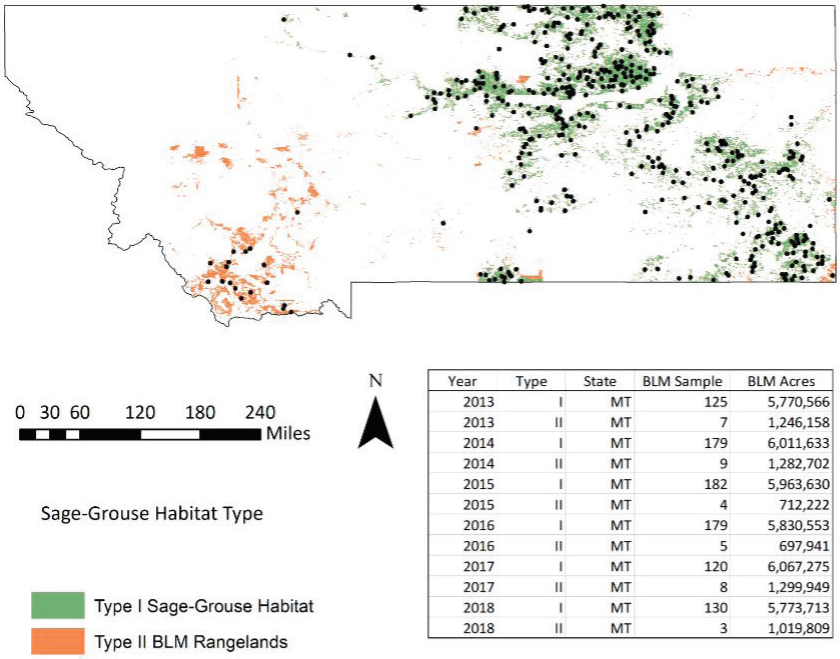
# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance in PHMA, and sage-grouse population trends.

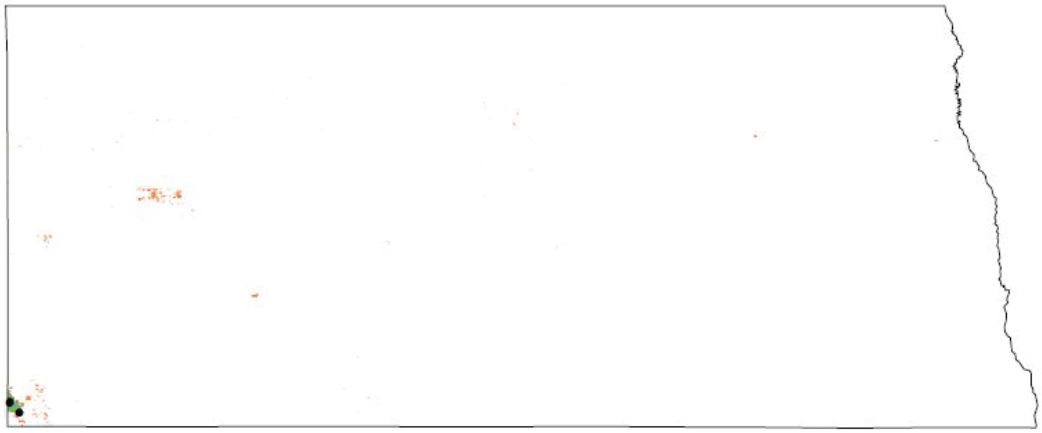
## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses

#### 1.1.1. Plot Locations for Montana, North Dakota and South Dakota Used to Derive Statewide Estimates




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | MT | 125 | 5,770,566 |
| 2013 | II | MT | 7 | 1,246,158 |
| 2014 | I | MT | 179 | 6,011,633 |
| 2014 | II | MT | 9 | 1,282,702 |
| 2015 | I | MT | 182 | 5,963,630 |
| 2015 | II | MT | 4 | 712,222 |
| 2016 | I | MT | 179 | 5,830,553 |
| 2016 | II | MT | 5 | 697,941 |
| 2017 | I | MT | 120 | 6,067,275 |
| 2017 | II | MT | 8 | 1,299,949 |
| 2018 | I | MT | 130 | 5,773,713 |
| 2018 | II | MT | 3 | 1,019,809 |



0 15 30 60 90 120 Miles

N

| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2014 | II | ND | 0 | 0 |
| 2015 | I | ND | 2 | 20,543 |
| 2015 | II | ND | 0 | 0 |
| 2017 | I | ND | 2 | 20,543 |

Sage-Grouse Habitat Type

Type I Sage-Grouse Habitat

Type II BLM Rangelands

0 20 40 80 120 160 Miles

N

| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | II | SD | 2 | 684,614 |
| 2014 | II | SD | 6 | 696,292 |
| 2015 | II | SD | 4 | 684,990 |
| 2016 | II | SD | 0 | 0 |
| 2017 | II | SD | 2 | 683,891 |
| 2018 | II | SD | 2 | 607,850 |

Sage-Grouse Habitat Type

Type I Sage-Grouse Habitat

Tye II BLM Rangelands

**Figure 1.** Montana, North Dakota, and South Dakota habitat conditions for type I (BLM rangelands within greater sage-grouse habitat) and type II (BLM rangelands outside of greater sage-grouse habitat) and summary table of number of BLM sample points and BLM acres.

**1.1.2.** Additional indicators are provided below for sage-grouse habitat (type I) and non habitat (type II) within the state including: percent foliar cover of sagebrush; mean sagebrush height (inches); percent of sagebrush cover that is columnar in sagebrush shape; percent of sagebrush cover that is spreading in sagebrush shape; percent foliar cover of perennial grasses and forbs; mean herbaceous plant height (inches); percent of BLM rangelands with invasive plant species present; percent of BLM rangelands with greater than 25% foliar cover of invasive plant species; percent foliar cover of annual grasses; percent cover of bare ground. Each figure includes the 80% confidence interval, as indicated by the bars.

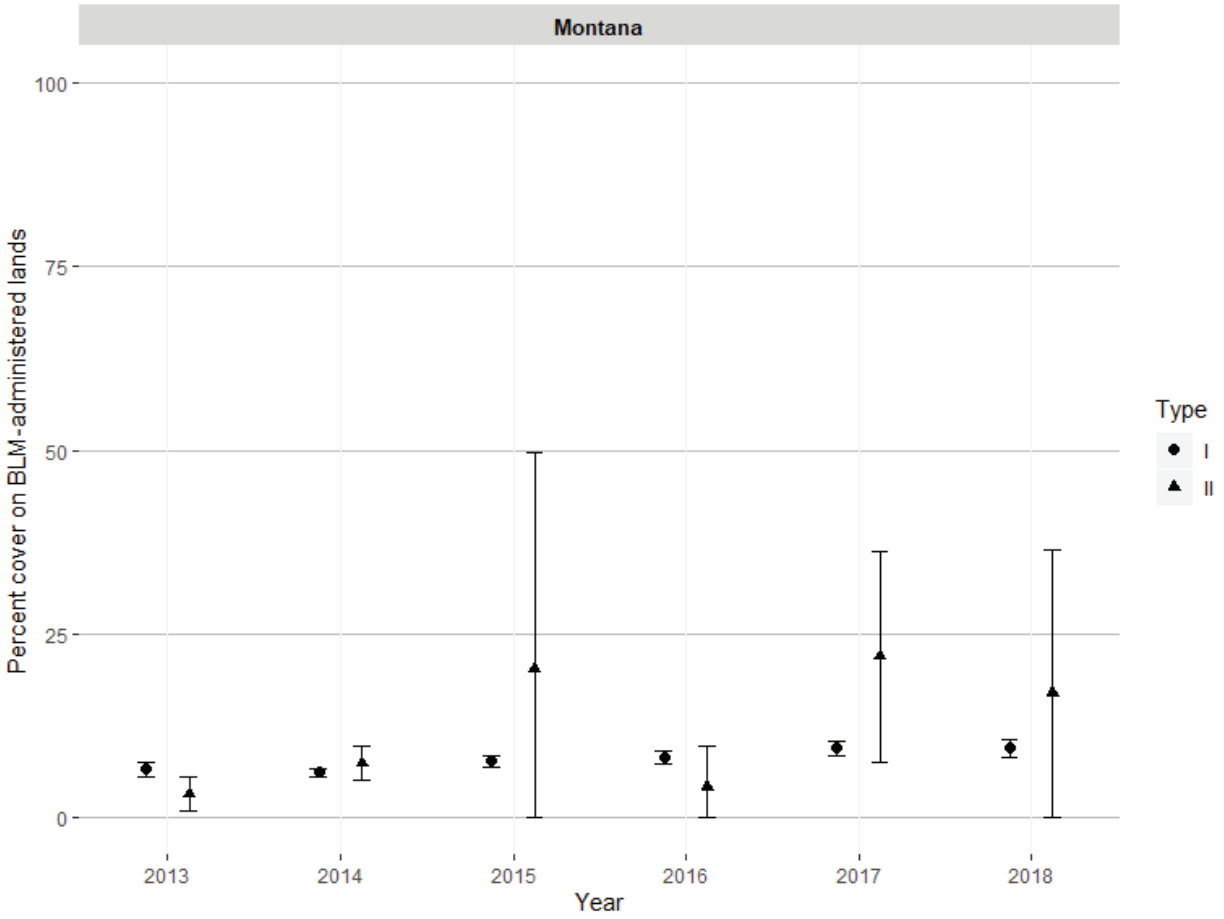



**Figure 2.** Percent cover of sagebrush on BLM Montana/Dakotas rangelands.

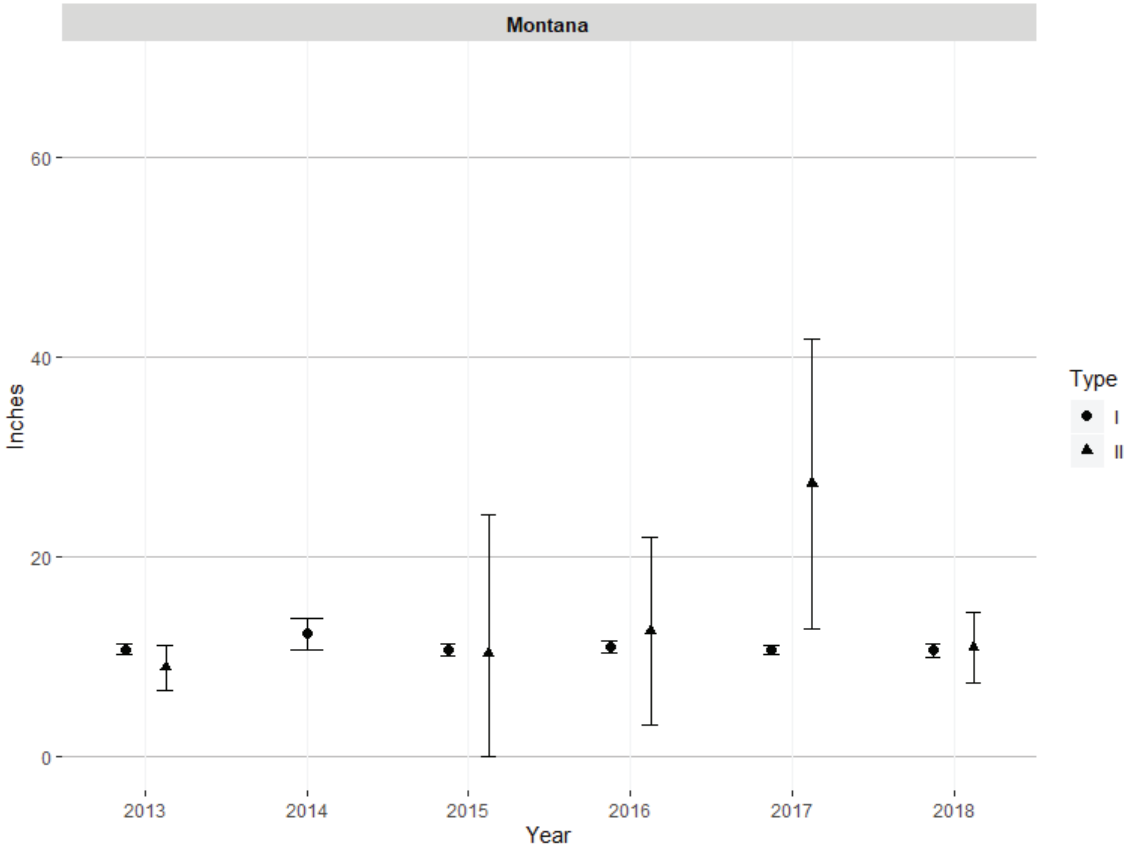



**Figure 3.** Mean sagebrush species height in inches on BLM Montana/Dakotas rangelands.

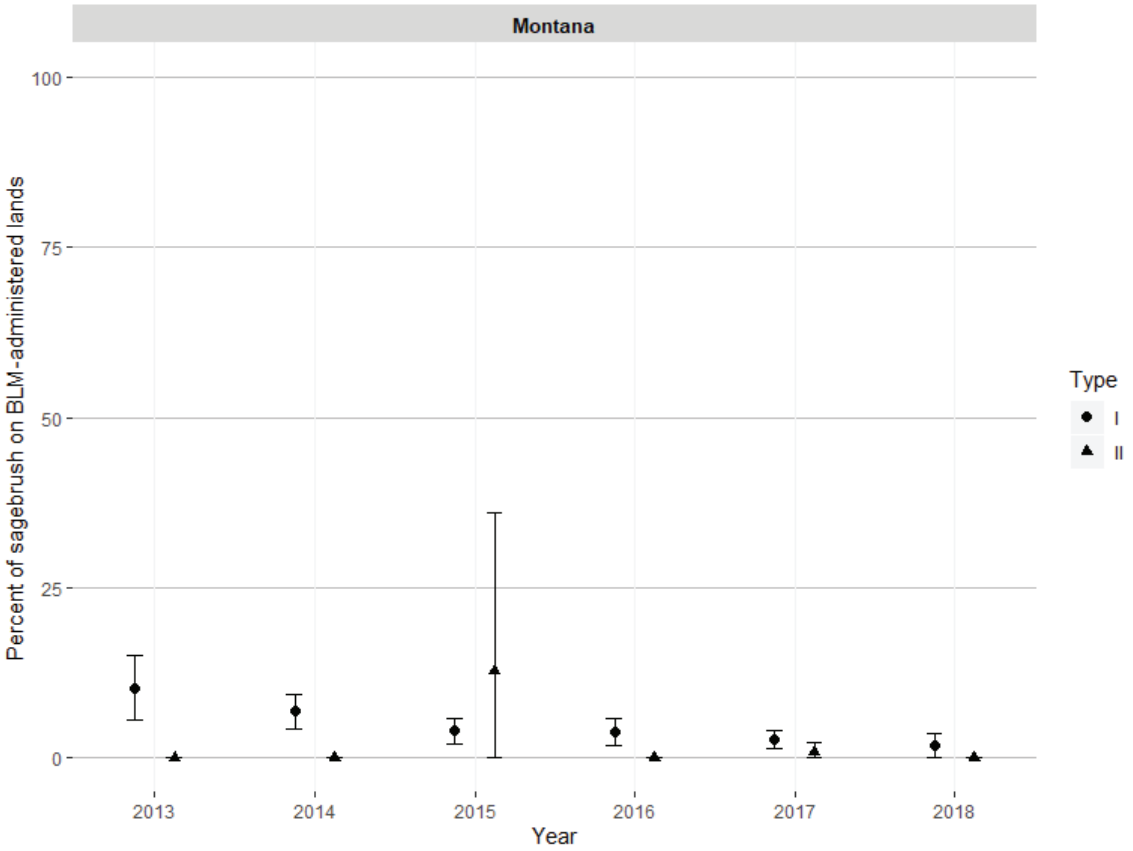



**Figure 4.** Proportion of sagebrush this is columnar shaped on BLM Montana/Dakotas rangelands.

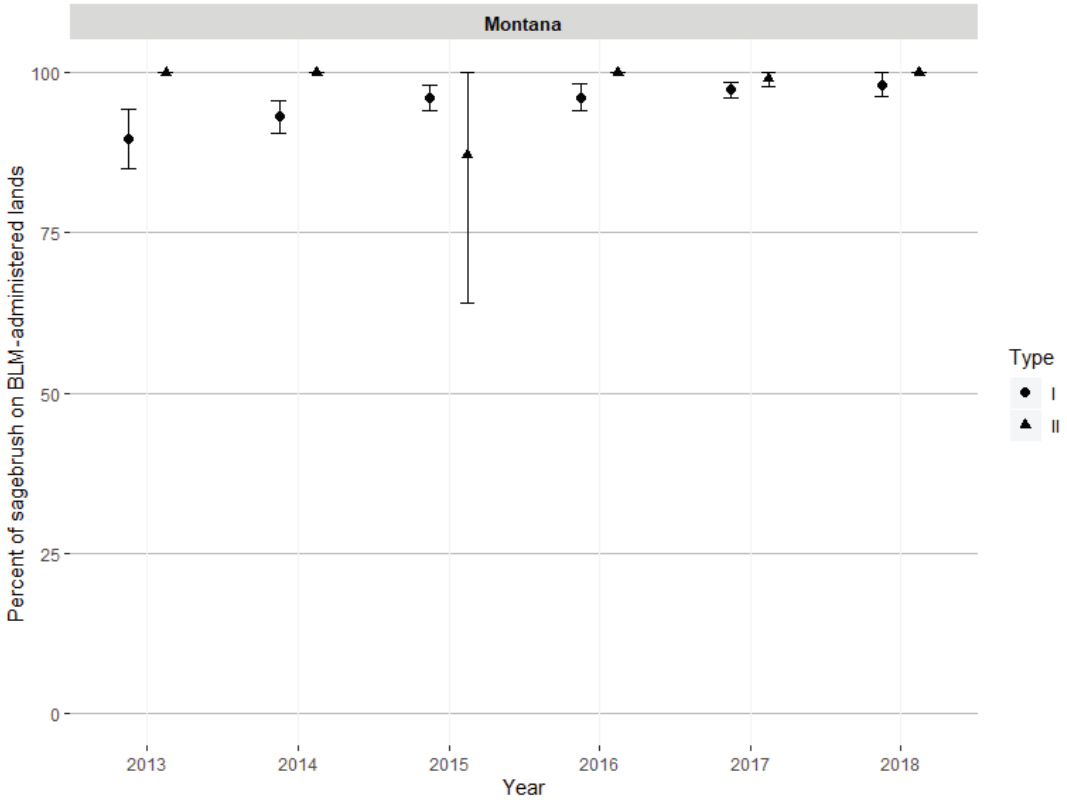



**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM Montana/ Dakotas rangelands.

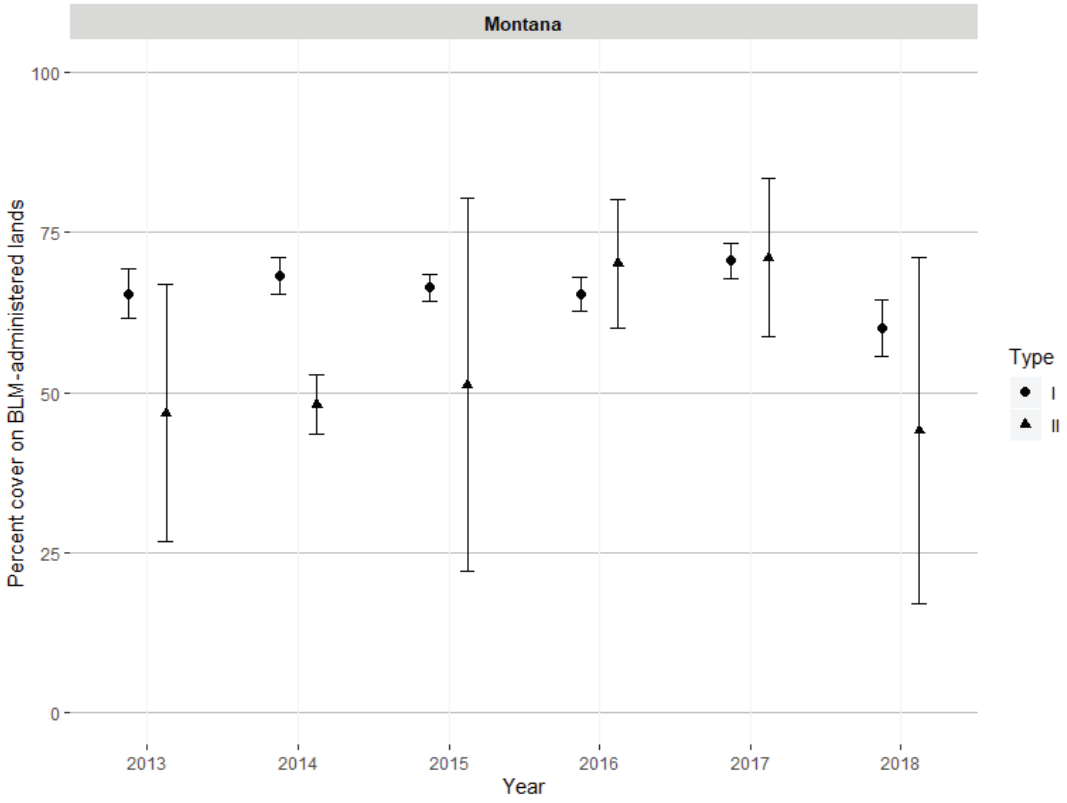



**Figure 6.** Percent cover of perennial grasses and perennial forbs on BLM Montana/ Dakotas rangelands.

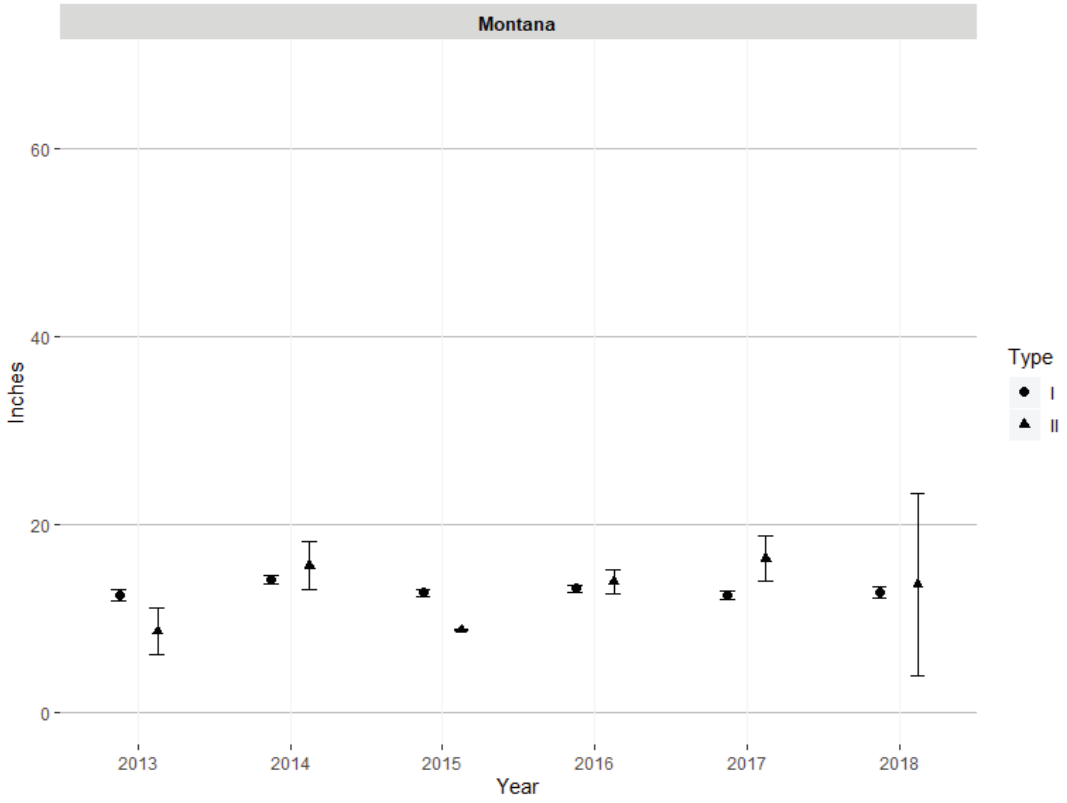



**Figure 7.** Mean herbaceous plant species height in inches on BLM Montana/Dakotas rangelands.

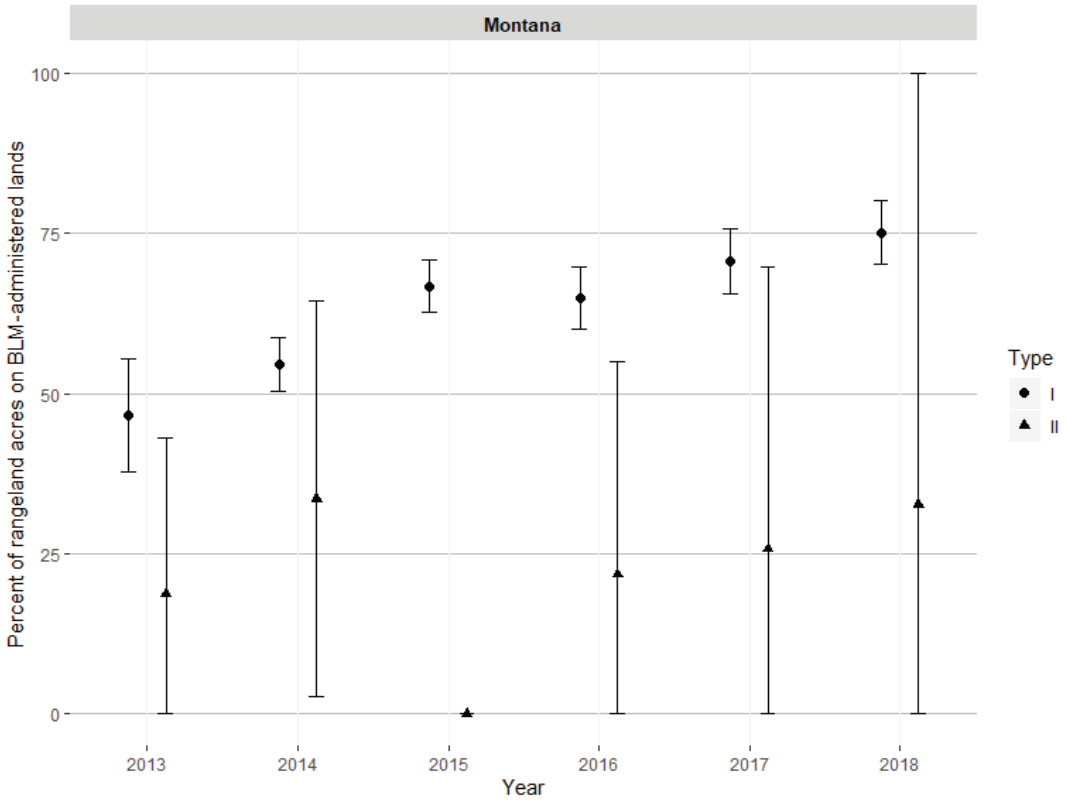



**Figure 8.** Proportion of BLM Montana/Dakotas rangelands with nonnative invasive species present.

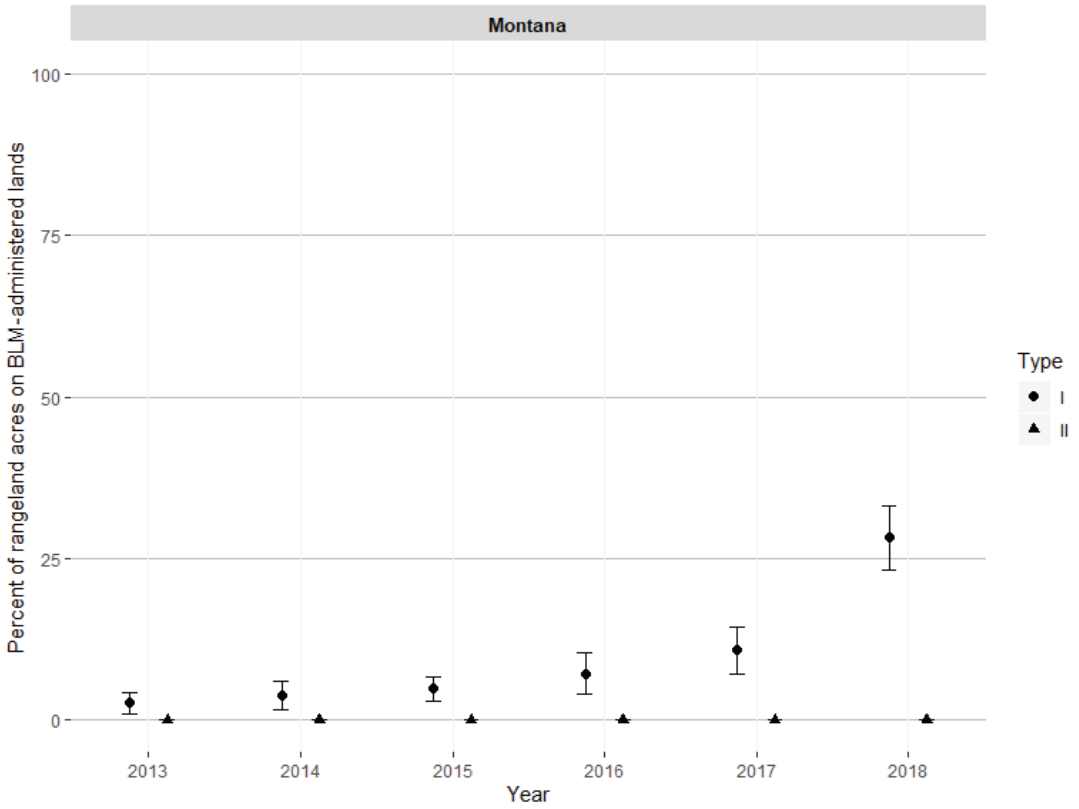



**Figure 9.** Proportion of BLM Montana/Dakotas rangelands where >25% of foliar cover is comprised of nonnative invasive species.

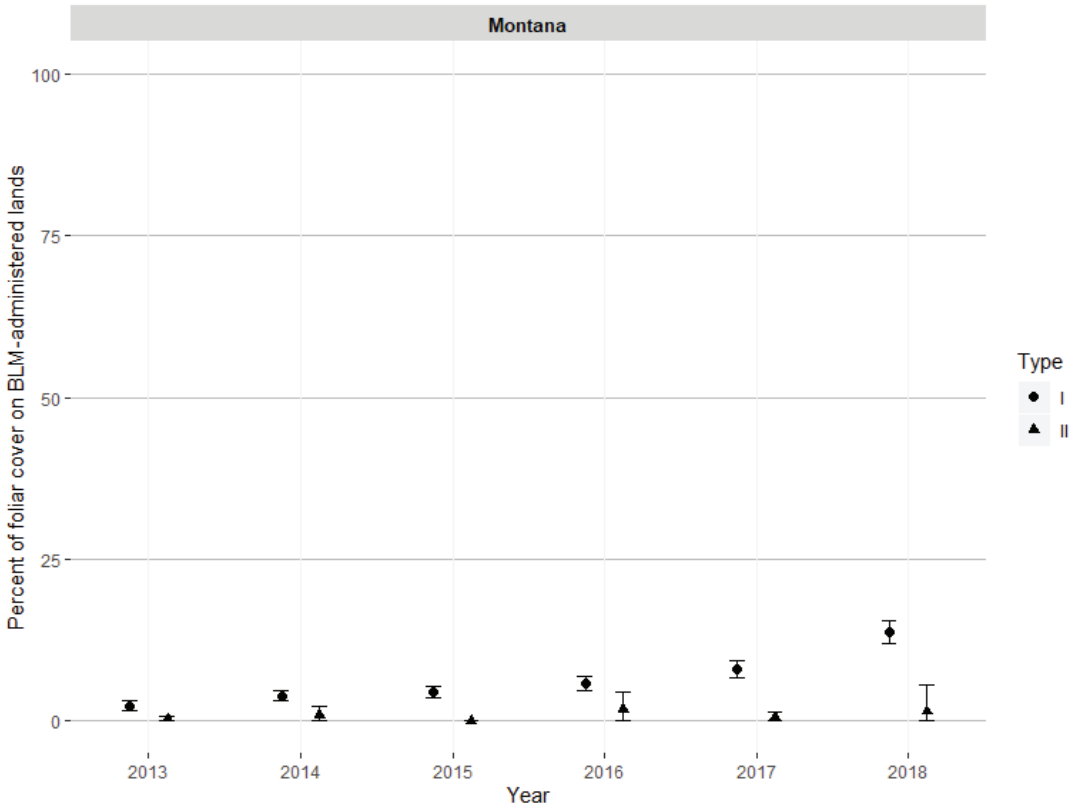



**Figure 10.** Proportion of vegetation composed on nonnative invasive plant species on BLM Montana/Dakotas rangelands.

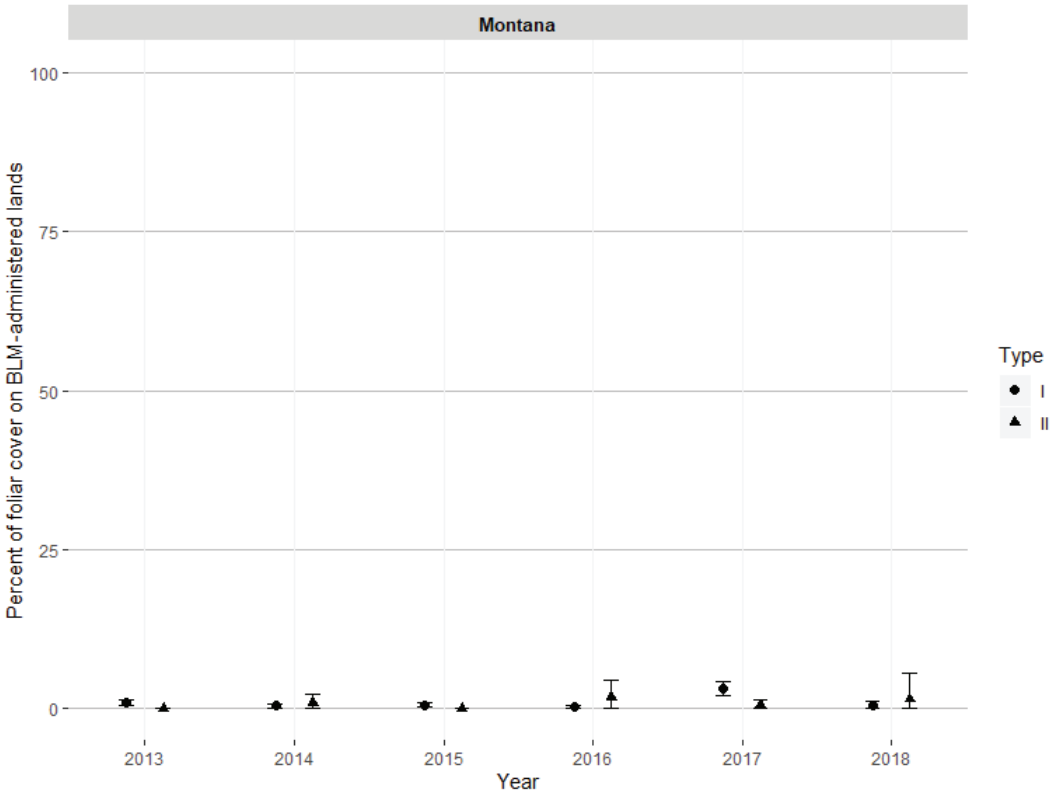



**Figure 11.** Proportion of vegetation composed of annual grasses on BLM Montana/Dakotas rangelands.

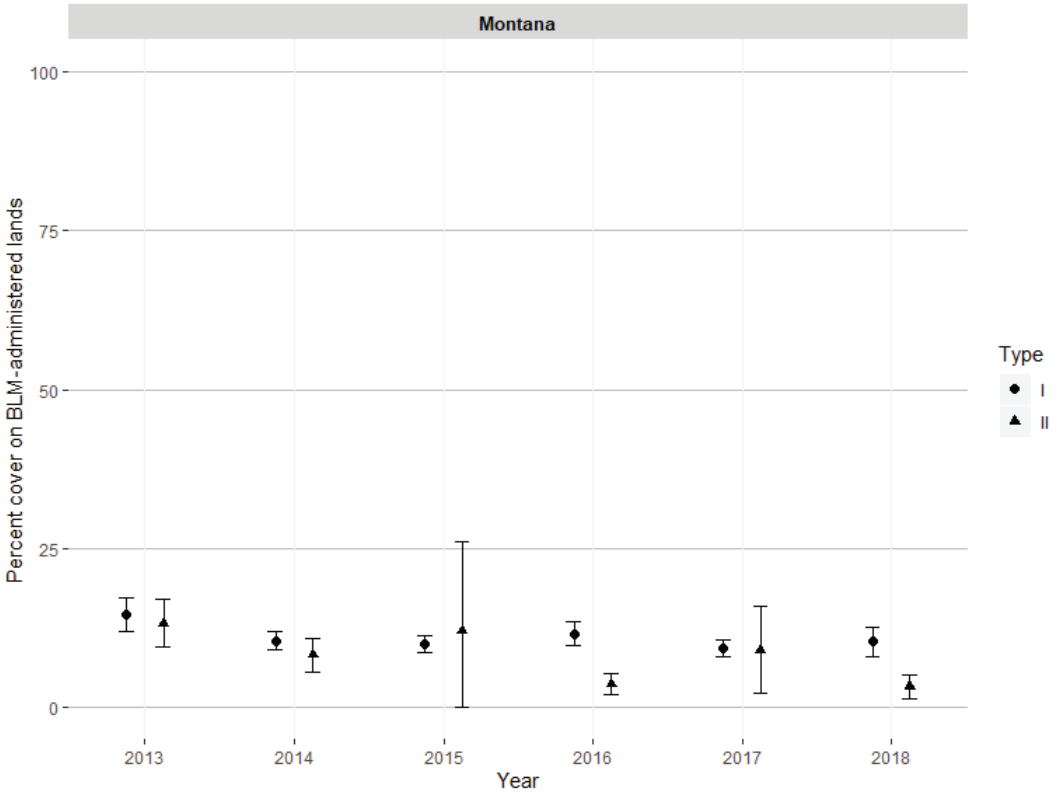



**Figure 12.** Percent cover of bare ground on BLM Montana/Dakotas rangelands.

## 1.2. Habitat conditions within seasonal habitat areas

### 1.2.1. Habitat Objectives Summary Table

**Table 1.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Billings Field Office

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5 - 25% | 25 | 71.4 | 10 | 28.6 | 0 | 0 | 35 | 100 |
| Perennial Grass Cover | >10% | 28 | 80 | 7 | 20 | 0 | 0 | 35 | 100 |
| Perennial Forb Cover | ≥3% | 17 | 48.6 | 18 | 51.4 | 0 | 0 | 35 | 100 |
| Sagebrush Height | 6-20 inches | 30 | 85.7 | 5 | 14.3 | 0 | 0 | 35 | 100 |
| Sagebrush Shape | Spreading | 9 | 25.7 | 1 | 2.9 | 25 | 71.4 | 35 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | 1.4-11.3 in | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5 - 25% | 15 | 45.5 | 18 | 54.5 | 0 | 0 | 33 | 100 |
| Perennial Grass Cover | >10% | 33 | 100 | 0 | 0 | 0 | 0 | 33 | 100 |
| Perennial Forb Cover | ≥3% | 26 | 78.8 | 7 | 21.2 | 0 | 0 | 33 | 100 |
| Sagebrush Height | 6-20 inches | 22 | 66.7 | 3 | 9.1 | 8 | 24.2 | 33 | 100 |
| Sagebrush Shape | Spreading | 5 | 15.2 | 0 | 0 | 28 | 84.8 | 33 | 100 |
| Perennial Grass and Forb Height (includes residual grasses) | 1.4-11.3 in | 3 | 9.1 | 30 | 90.9 | 0 | 0 | 33 | 100 |

**Table 1** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Billings Field Office

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5-25% | 37 | 74 | 13 | 26 | 0 | 0 | 50 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 43 | 86 | 7 | 14 | 0 | 0 | 50 | 100 |
| Sagebrush Height | 15-30 cm | 41 | 82 | 6 | 12 | 3 | 6 | 50 | 100 |
| Preferred Forb Species | Common ≥3 in composition | 0 | 0 | 0 | 0 | 50 | 100 | 50 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5-25% | 16 | 41 | 23 | 59 | 0 | 0 | 39 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 38 | 97.4 | 1 | 2.6 | 0 | 0 | 39 | 100 |
| Sagebrush Height | 15-30 cm | 23 | 59 | 9 | 23.1 | 7 | 17.9 | 39 | 100 |
| Preferred Forb Species | Common ≥3 in composition | 0 | 0 | 0 | 0 | 39 | 100 | 39 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 10% | 55 | 64.7 | 30 | 35.3 | 0 | 0 | 85 | 100 |
| Sagebrush Height | 10 inches | 0 | 0 | 0 | 0 | 85 | 100 | 85 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 10% | 17 | 23.6 | 55 | 76.4 | 0 | 0 | 72 | 100 |
| Sagebrush Height | 10 inches | 0 | 0 | 0 | 0 | 72 | 100 | 72 | 100 |

[1] Desired condition represents the combined range of values for arid and mesic sites found in MT habitat objectives tables.

[2] Indicator not monitored on a plot may be due to protocol (e.g., no sagebrush height because it was not a required field) or may be that the species/life form was absent or present in very low abundance (e.g., no sagebrush height because sagebrush was sparse enough that it was never encountered where heights were measured).

**Table 2.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the South Dakota Field Office

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 2 - 20% | 17 | 58.6 | 12 | 41.4 | 0 | 0 | 29 | 100 |
| Perennial Grass Cover | >10% | 29 | 100 | 0 | 0 | 0 | 0 | 29 | 100 |
| Perennial Forb Cover | ≥3% | 26 | 89.7 | 3 | 10.3 | 0 | 0 | 29 | 100 |
| Sagebrush Height | 4-12 in | 6 | 20.7 | 22 | 75.9 | 1 | 3.4 | 29 | 100 |
| Sagebrush Shape | Spreading | 0 | 0 | 0 | 0 | 29 | 100 | 29 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 29 | 100 | 29 | 100 |
| Perennial Grass and Forb Height (includes residual grasses) | Adequate | 0 | 0 | 0 | 0 | 29 | 100 | 29 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Cover | 2 - 20% | 0 | 0 | 1 | 100 | 0 | 0 | 1 | 100 |
| Perennial Grass Cover | >10% | 1 | 100 | 0 | 0 | 0 | 0 | 1 | 100 |
| Perennial Forb Cover | ≥3% | 1 | 100 | 0 | 0 | 0 | 0 | 1 | 100 |
| Sagebrush Height | 4-12 in | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |
| Sagebrush Shape | Spreading | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |
| Perennial Grass and Forb Height (includes residual grasses) | Adequate | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |

**Table 2** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the South Dakota Field Office

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 2-20% | 31 | 47 | 35 | 53 | 0 | 0 | 66 | 100 |
| Perennial Grass Cover | ≥10% | 66 | 100 | 0 | 0 | 0 | 0 | 66 | 100 |
| Sagebrush Height | 4-12 in | 12 | 18.2 | 26 | 39.4 | 28 | 42.4 | 66 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 66 | 100 | 66 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 2-20% | 4 | 80 | 1 | 20 | 0 | 0 | 5 | 100 |
| Perennial Grass Cover | ≥10% | 5 | 100 | 0 | 0 | 0 | 0 | 5 | 100 |
| Sagebrush Height | 4-12 in | 0 | 0 | 4 | 80 | 1 | 20 | 5 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 5 | 100 | 5 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 2-20% | 48 | 50.5 | 47 | 49.5 | 0 | 0 | 95 | 100 |
| Sagebrush Height | Optimized for potential | 0 | 0 | 0 | 0 | 95 | 100 | 95 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 2-20% | 4 | 66.7 | 2 | 33.3 | 0 | 0 | 6 | 100 |
| Sagebrush Height | Optimized for potential | 0 | 0 | 0 | 0 | 6 | 100 | 6 | 100 |

**Table 3.** Summary of Habitat Objectives by Seasonal Use Areas within Priority Habitat Management Areas for the North Dakota Field Office. There were no monitoring locations completed within General Habitat Management Areas.

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥ 5 - 25% | 0 | 0 | 1 | 100 | 0 | 0 | 1 | 100 |
| Perennial Grass Cover | ≥10% | 1 | 100 | 0 | 0 | 0 | 0 | 1 | 100 |
| Perennial Forb Cover | ≥5% | 1 | 100 | 0 | 0 | 0 | 0 | 1 | 100 |
| Sagebrush Height | 7-30 in | 1 | 100 | 0 | 0 | 0 | 0 | 1 | 100 |
| Sagebrush Shape | Spreading | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | 4.4-11.3 in | 0 | 0 | 0 | 0 | 1 | 100 | 1 | 100 |

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥5% | 5 | 23.8 | 16 | 76.2 | 0 | 0 | 21 | 100 |
| Perennial Grass Cover | >10% | 19 | 90.5 | 2 | 9.5 | 0 | 0 | 21 | 100 |
| Sagebrush Height | 7-30 in | 12 | 57.1 | 3 | 14.3 | 6 | 28.6 | 21 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 21 | 100 | 21 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥10% | 1 | 4.5 | 21 | 95.5 | 0 | 0 | 22 | 100 |
| Sagebrush Height | ≥ 6 inches | 0 | 0 | 0 | 0 | 22 | 100 | 22 | 100 |

**Table 4.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Miles City Field Office

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5-25% | 20 | 57.1 | 15 | 42.9 | 0 | 0 | 35 | 100 |
| Perennial Grass Cover | ≥10% | 32 | 91.4 | 3 | 8.6 | 0 | 0 | 35 | 100 |
| Perennial Forb Cover | ≥3% | 24 | 68.6 | 11 | 31.4 | 0 | 0 | 35 | 100 |
| Sagebrush Height | 15-50 cm | 22 | 62.9 | 9 | 25.7 | 4 | 11.4 | 35 | 100 |
| Sagebrush Shape | Spreading | 20 | 57.1 | 1 | 2.9 | 14 | 40 | 35 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | 11.4-29cm | 0 | 0 | 35 | 100 | 0 | 0 | 35 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5-25% | 37 | 54.4 | 31 | 45.6 | 0 | 0 | 68 | 100 |
| Perennial Grass Cover | ≥10% | 67 | 98.5 | 1 | 1.5 | 0 | 0 | 68 | 100 |
| Perennial Forb Cover | ≥3% | 56 | 82.4 | 12 | 17.6 | 0 | 0 | 68 | 100 |
| Sagebrush Height | 15-50 cm | 49 | 72.1 | 10 | 14.7 | 9 | 13.2 | 68 | 100 |
| Sagebrush Shape | Spreading | 42 | 61.8 | 1 | 1.5 | 25 | 36.7 | 68 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | 11.4-29cm | 0 | 0 | 68 | 100 | 0 | 0 | 68 | 100 |

**Table 4** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Miles City Field Office

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| RHMA* | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 5-25% | 1 | 25 | 3 | 75 | 0 | 0 | 4 | 100 |
| Perennial Grass Cover | ≥10% | 4 | 100 | 0 | 0 | 0 | 0 | 4 | 100 |
| Perennial Forb Cover | ≥3% | 3 | 75 | 1 | 25 | 0 | 0 | 4 | 100 |
| Sagebrush Height | 15-50 cm | 2 | 50 | 0 | 0 | 2 | 50 | 4 | 100 |
| Sagebrush Shape | Spreading | 2 | 50 | 0 | 0 | 2 | 50 | 4 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | 11.4-29cm | 0 | 0 | 4 | 100 | 0 | 0 | 4 | 100 |

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition Count | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 5-25% | 87 | 51.5 | 82 | 48.5 | 0 | 0 | 169 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 168 | 99.4 | 1 | 0.6 | 0 | 0 | 169 | 100 |
| Sagebrush Height | 15-50cm | 121 | 71.6 | 27 | 16 | 21 | 12.4 | 169 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 169 | 100 | 169 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Cover | 5-25% | 116 | 49.4 | 119 | 50.6 | 0 | 0 | 235 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 232 | 98.7 | 3 | 1.3 | 0 | 0 | 235 | 100 |
| Sagebrush Height | 15-50cm | 152 | 64.7 | 36 | 15.3 | 47 | 20 | 235 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 235 | 100 | 235 | 100 |

**Table 4** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Miles City Field Office

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| RHMA* | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 5-25% | 5 | 29.4 | 12 | 70.6 | 0 | 0 | 17 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 17 | 100 | 0 | 0 | 0 | 0 | 17 | 100 |
| Sagebrush Height | 15-50cm | 10 | 58.8 | 2 | 11.8 | 5 | 29.4 | 17 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 17 | 100 | 17 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | >10% | 63 | 30.9 | 141 | 69.1 | 0 | 0 | 204 | 100 |
| Sagebrush Height | ≥6 in | 0 | 0 | 0 | 0 | 204 | 100 | 204 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Cover | >10% | 87 | 28.7 | 216 | 71.3 | 0 | 0 | 303 | 100 |
| Sagebrush Height | ≥6 in | 0 | 0 | 0 | 0 | 303 | 100 | 303 | 100 |
| RHMA* | | | | | | | | | |
| Sagebrush Cover | >10% | 4 | 19 | 17 | 81 | 0 | 0 | 21 | 100 |
| Sagebrush Height | ≥6 in | 0 | 0 | 0 | 0 | 21 | 100 | 21 | 100 |

***** RHMA – Restoration Habitat Management Area

**Table 5.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Lewistown Field Office

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 10-25% | 24 | 43.6 | 31 | 56.4 | 0 | 0 | 55 | 100 |
| Perennial Grass Cover | ≥15% | 51 | 92.7 | 4 | 7.3 | 0 | 0 | 55 | 100 |
| Perennial Forb Cover | ≥10% | 22 | 40 | 33 | 60 | 0 | 0 | 55 | 100 |
| Sagebrush Height | 40-80 cm | 10 | 18.2 | 38 | 69.1 | 7 | 12.7 | 55 | 100 |
| Sagebrush Shape | Spreading | 36 | 65.5 | 2 | 3.6 | 17 | 30.9 | 55 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | ≥18cm | 0 | 0 | 55 | 100 | 0 | 0 | 55 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Cover | 10-25% | 7 | 31.8 | 15 | 68.2 | 0 | 0 | 22 | 100 |
| Perennial Grass Cover | ≥15% | 20 | 90.9 | 2 | 9.1 | 0 | 0 | 22 | 100 |
| Perennial Forb Cover | ≥10% | 4 | 18.2 | 18 | 81.8 | 0 | 0 | 22 | 100 |
| Sagebrush Height | 40-80 cm | 8 | 36.4 | 11 | 50 | 3 | 13.6 | 22 | 100 |
| Sagebrush Shape | Spreading | 5 | 22.7 | 2 | 9.1 | 15 | 68.2 | 22 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | ≥18cm | 0 | 0 | 22 | 100 | 0 | 0 | 22 | 100 |

**Table 5** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Lewistown Field Office

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5-25% | 35 | 63.6 | 20 | 36.4 | 0 | 0 | 55 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 50 | 90.9 | 5 | 9.1 | 0 | 0 | 55 | 100 |
| Sagebrush Height | 40-80 cm | 10 | 18.2 | 38 | 69.1 | 7 | 12.7 | 55 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 55 | 100 | 55 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5-25% | 10 | 45.5 | 12 | 54.5 | 0 | 0 | 22 | 100 |
| Perennial Grass and Forb Cover | ≥10% | 18 | 81.8 | 4 | 18.2 | 0 | 0 | 22 | 100 |
| Sagebrush Height | 40-80 cm | 8 | 36.4 | 11 | 50 | 3 | 13.6 | 22 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 22 | 100 | 22 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | ≥10% | 25 | 45.5 | 30 | 54.5 | 0 | 0 | 55 | 100 |
| Sagebrush Height | ≥25 cm | 0 | 0 | 0 | 0 | 55 | 100 | 55 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | ≥10% | 9 | 40.9 | 13 | 59.1 | 0 | 0 | 22 | 100 |
| Sagebrush Height | ≥25 cm | 0 | 0 | 0 | 0 | 22 | 100 | 22 | 100 |

**Table 6.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Southwest Montana

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Meeting | | Monitoring Locations Not Meeting | | Monitoring Locations Where Indicator Not Measured | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 15-25% | 6 | 16.7 | 30 | 83.3 | 0 | 0 | 36 | 100 |
| Perennial Grass Cover | ≥10-15% | 35 | 97.2 | 1 | 2.8 | 0 | 0 | 36 | 100 |
| Perennial Forb Cover | ≥5-10% | 20 | 55.6 | 16 | 44.4 | 0 | 0 | 36 | 100 |
| Sagebrush Height | 30-80 cm | 12 | 33.3 | 22 | 61.1 | 2 | 5.6 | 36 | 100 |
| Sagebrush Shape | Spreading | 4 | 11.1 | 1 | 2.8 | 31 | 86.1 | 36 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 36 | 100 | 36 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥18 cm | 35 | 97.2 | 1 | 2.8 | 0 | 0 | 36 | 100 |
| Perennial Forb Height (includes residual grasses) | ≥18 cm | 19 | 52.8 | 7 | 19.4 | 10 | 27.8 | 36 | 100 |
| GHMA | | | | | | | | | |
| Sagebrush Cover | 15-25% | 2 | 10 | 18 | 90 | 0 | 0 | 20 | 100 |
| Perennial Grass Cover | ≥10-15% | 20 | 100 | 0 | 0 | 0 | 0 | 20 | 100 |
| Perennial Forb Cover | ≥5-10% | 11 | 55 | 9 | 45 | 0 | 0 | 20 | 100 |
| Sagebrush Height | 30-80 cm | 6 | 30 | 10 | 50 | 4 | 20 | 20 | 100 |
| Sagebrush Shape | Spreading | 2 | 10 | 0 | 0 | 18 | 90 | 20 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 20 | 100 | 20 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥18 cm | 18 | 90 | 2 | 10 | 0 | 0 | 20 | 100 |
| Perennial Forb Height (includes residual grasses) | ≥18 cm | 11 | 55 | 4 | 20 | 5 | 25 | 20 | 100 |

**Table 6** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Southwest Montana

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 10-25% | 32 | 40 | 48 | 60 | 0 | 0 | 80 | 100 |
| Perennial Grass and Forb Cover | ≥15% | 80 | 100 | 0 | 0 | 0 | 0 | 80 | 100 |
| Sagebrush Height | 40-80 cm | 26 | 32.5 | 46 | 57.5 | 8 | 10 | 80 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 80 | 100 | 80 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 10-25% | 6 | 15.8 | 32 | 84.2 | 0 | 0 | 38 | 100 |
| Perennial Grass Cover | ≥15% | 38 | 100 | 0 | 0 | 0 | 0 | 38 | 100 |
| Sagebrush Height | 40-80 cm | 11 | 28.9 | 12 | 31.6 | 15 | 39.5 | 38 | 100 |
| Preferred Forb Species | Common with several present | 0 | 0 | 0 | 0 | 38 | 100 | 38 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | ≥10% | 76 | 64.4 | 42 | 35.6 | 0 | 0 | 118 | 100 |
| Sagebrush Height | ≥25 cm | 0 | 0 | 0 | 0 | 118 | 100 | 118 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | ≥10% | 21 | 35.6 | 38 | 64.4 | 0 | 0 | 59 | 100 |
| Sagebrush Height | ≥25 cm | 0 | 0 | 0 | 0 | 59 | 100 | 59 | 100 |

**Table 7.** Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Havre, Malta, and Glasgow Field Offices

| Nesting/Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | ≥2-25% | 48 | 48.5 | 51 | 51.5 | 0 | 0 | 99 | 100 |
| Perennial Grass Cover | ≥10-15% | 98 | 99 | 1 | 1 | 0 | 0 | 99 | 100 |
| Perennial Forb Cover | ≥3-10% | 78 | 78.8 | 21 | 21.2 | 0 | 0 | 99 | 100 |
| Sagebrush Height | ≥6-12 in | 26 | 26.2 | 66 | 66.7 | 7 | 7.1 | 99 | 100 |
| Preferred Forb Species | ≥3-5 species | 85 | 85.9 | 14 | 14.1 | 0 | 0 | 99 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥5-7 in | 98 | 99 | 1 | 1 | 0 | 0 | 99 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥18 cm | 35 | 97.2 | 1 | 2.8 | 0 | 0 | 36 | 100 |
| Perennial Forb Height (includes residual grasses) | ≥18 cm | 19 | 52.8 | 7 | 19.4 | 10 | 27.8 | 36 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | ≥2-25% | 21 | 45.7 | 25 | 54.3 | 0 | 0 | 46 | 100 |
| Perennial Grass Cover | ≥10-15% | 46 | 100 | 0 | 0 | 0 | 0 | 46 | 100 |
| Perennial Forb Cover | ≥3-10% | 35 | 76.1 | 11 | 23.9 | 0 | 0 | 46 | 100 |
| Sagebrush Height | ≥6-12 in | 43 | 93.5 | 1 | 2.2 | 2 | 4.3 | 46 | 100 |
| Preferred Forb Species | ≥3-5 species | 36 | 78.3 | 10 | 21.7 | 0 | 0 | 46 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥5-7 in | 46 | 100 | 0 | 0 | 0 | 0 | 46 | 100 |
| Perennial Grass Height (includes residual grasses) | ≥18 cm | 18 | 90 | 2 | 10 | 0 | 0 | 20 | 100 |
| Perennial Forb Height (includes residual grasses) | ≥18 cm | 11 | 55 | 4 | 20 | 5 | 25 | 20 | 100 |

**Table 7** *(continued)*. Summary of Habitat Objectives by Seasonal Use Areas and Habitat Management Areas for the Havre, Malta, and Glasgow Field Offices

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | ≥2-25% | 48 | 48.5 | 51 | 51.5 | 0 | 0 | 99 | 100 |
| Perennial Grass Cover | ≥3-15% | 98 | 99 | 1 | 1 | 0 | 0 | 99 | 100 |
| Sagebrush Height | ≥6-12 in | 26 | 26.2 | 66 | 66.7 | 7 | 7.1 | 99 | 100 |
| Preferred Forb Species | ≥3-5 species | 85 | 85.9 | 14 | 14.1 | 0 | 0 | 99 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | ≥2-25% | 6 | 35.3 | 11 | 64.7 | 0 | 0 | 17 | 100 |
| Perennial Grass Cover | ≥3-15% | 17 | 100 | 0 | 0 | 0 | 0 | 17 | 100 |
| Sagebrush Height | ≥6-12 in | 17 | 100 | 0 | 0 | 0 | 0 | 17 | 100 |
| Preferred Forb Species | ≥3-5 species | 9 | 52.9 | 8 | 47.1 | 0 | 0 | 17 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | >10% | 98 | 27.1 | 264 | 72.9 | 0 | 0 | 362 | 100 |
| Sagebrush Height | >10 in | 0 | 0 | 0 | 0 | 362 | 100 | 362 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | >10% | 15 | 20.3 | 59 | 79.7 | 0 | 0 | 74 | 100 |
| Sagebrush Height | >10 in | 0 | 0 | 0 | 0 | 74 | 100 | 74 | 100 |

## 1.3. Habitat trigger summary

There have been no soft or hard triggers tripped in Montana/Dakotas from 2015 to 2019. Therefore, a causal factor analysis was not needed.

**Table 8.** Habitat Trigger Summary

| Year | Number and Location of Soft Habitat Triggers Tripped | Number and Location of Hard Habitat Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | 0 | 0 | N/A |
| **2016** | 0 | 0 | N/A |
| **2017** | 0 | 0 | N/A |
| **2018** | 0 | 0 | N/A |
| **2019** | 0 | 0 | N/A |

**Table 9.** Overall Change in Existing Vegetation Type (EVT) of Sagebrush Cover Compared to Biophysical Setting (BpS) by Biologically Significant Unit

| Biologically Significant Unit (BSU) | Overall change in % of BpS that is EVT on PHMA in BSU from 2012 to 2017 |
|---|---|
| Dakotas | -1.45% |
| Northern Montana | -2.19% |
| Powder River Basin | -33.82%* |
| SW Montana Conservation Area | -0.46% |
| Wyoming Basin | -1.36% |
| Yellowstone Watershed | -3.32% |

* In 2017, the Battle Complex fire burned approximately 95,137 acres across Montana and Wyoming and included the Brush Flat, Tidwell, and Deer Creek fires. The fire burned across 2 BSU's; the Buffalo BSU in Wyoming and the Powder River Basin BSU in Montana and Wyoming. In the Montana portion of the Powder River Basin BSU approximately 23,864 acres of PHMA habitat burned, of which only 1,014 acres were BLM.

Between 2012 and 2017 there was a cumulative loss of 26,628 EVT acres in the Powder River Basin and the Battle Complex fire accounted for almost 90% of that loss. Excluding the Battle Complex fire the change in EVT between 2012 to 2017 would have been just over 3%, similar to other BSU's in MT.

# 2. Land Health Standards Evaluations

## 2.1. Category A

These rangelands in Montana/Dakotas are meeting all standards or making significant progress toward meeting the standard

**Table 10.** Land Health Standards Evaluations in Category A

| Year | BLM Acres in Assessed Allotments |
|---|---|
| 2015 | 263,183 |
| 2016 | 126,363 |
| 2017 | 381,055 |
| 2018 | 102,100 |
| 2019 | 112,724 |
| **Total** | **985,426** |

## 2.2. Category B

These rangelands in Montana/Dakotas are not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (livestock is a significant factor)

**Table 11.** Land Health Standards Evaluation in Category B

| Year | BLM Acres in Assessed Allotments |
|---|---|
| 2015 | 43,947 |
| 2016 | 8,440 |
| 2017 | 8,484 |
| 2018 | 13,348 |
| 2019 | 0 |
| **Total** | **74,219** |

## 3. Surface Disturbance in PHMA

As mentioned in Section 3 of the Methods, MSGHCP tracks all surface disturbances in Montana in an "all lands" approach and provided the data for BLM Montana/Dakotas authorizations between 2015 and 2019 in PHMA that are listed in table 13 below. Neither North Dakota or South Dakota had any authorizations that met the requirement of a new surface disturbance in PHMA between 2015 and 2019.

**Table 12.** Disturbance Estimates for Montana/Dakotas between 2015-2019 by Biologically Significant Unit

| Biologically Significant Unit | Acres PHMA | Acres Disturbed in 2015 | Percentage of PHMA | Acres Disturbed in 2019 | Percentage of PHMA | Percentage Change |
|---|---|---|---|---|---|---|
| Dakotas | 1,444,236 | 14,896 | 1.03% | 15,146 | 1.05% | 0.02% |
| Northern Montana | 2,369,723 | 14,760 | 0.62% | 13,923 | 0.59% | -0.04% |
| Powder River Basin | 78,971 | 652 | 0.83% | 665 | 0.84% | 0.02% |
| SW Montana Conservation Area | 1,356,953 | 8,073 | 0.59% | 8,316 | 0.61% | 0.02% |
| Wyoming Basin | 310,640 | 3,360 | 1.08% | 3,432 | 1.10% | 0.02% |
| Yellowstone Watershed | 5,224,902 | 22,934 | 0.44% | 22,803 | 0.44% | 0% |

**Table 13.** Surface Disturbing Authorization on BLM lands within Montana/Dakotas between 2015 and 2020

| Decision/Program Area | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA |
|---|---|---|
| Coal Leasing | 0 | 0 |
| Fluid Mineral Leasing (O&G) | 18 | 1699 |
| Geothermal Energy | 0 | 0 |
| Locatable Minerals | 11 | 181 |
| Nonenergy Leasable Minerals | 0 | 0 |
| Rights-of-Way | 12 | 28 |
| Salable - Mineral Materials Disposals | 0 | 0 |
| Solar Energy | 0 | 0 |
| Trails & Travel Management | 0 | 0 |
| Utility Corridors | 13 | 104 |
| Wind Energy | 0 | 0 |
| Other | 0 | 0 |
| **TOTALS** | **54** | **2012** |

*Acreages are provisional and subject to change.

# 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agencies)

## 4.1. Population estimates

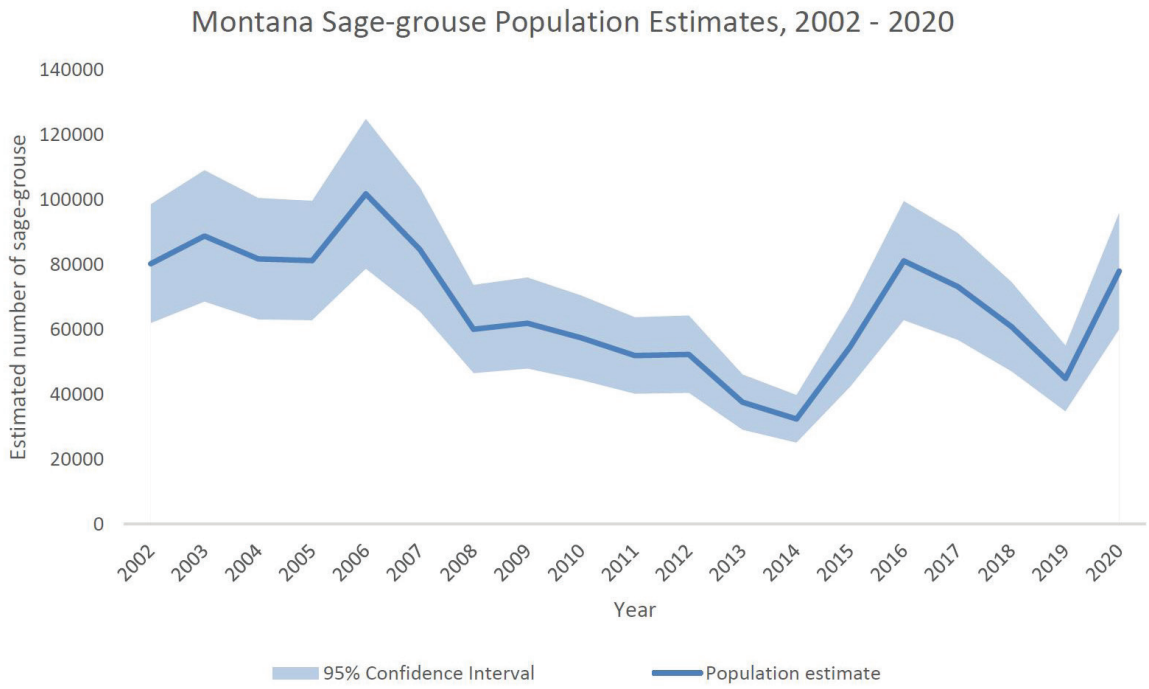



**Figure 13.** Greater Sage-Grouse population estimates and 95% confidence interval from N-mixture models in Montana, 2002–2020.

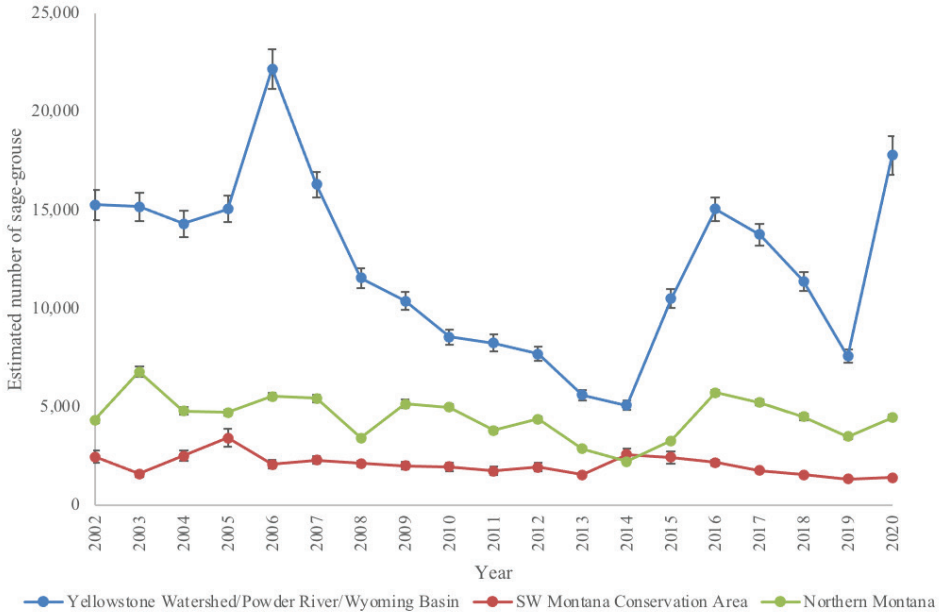



**Figure 14.** Greater Sage-Grouse population estimates (±SD) from N-mixture models for sage-grouse populations in Montana, 2002-2020. The leks within PHMA in Montana considered part of the Wyoming Basin and Powder River populations were combined with the Yellowstone population, as defined in the COT report (U.S. Fish and Wildlife Service, 2013).

North Dakota is on the northeastern fringe of sage-grouse distribution, occupying Bowman, Slope and Mercer counties. Until the mid-2000's the male lek counts indicated that the population was stable, oscillating on a roughly 10-year cycle. In 2007, the population declined by close to 60% due to a West Nile virus (WNv) outbreak followed by annual declines averaging 5% per year. By 2016, only 15 male sage-grouse were observed across 6 leks.

In 2017, North Dakota Game and Fish Department partnered with USGS, Utah State University and others to undertake a translocation program to augment the population. Sage-grouse have been sourced from near Rawlings, WY and between 2017 and 2019 over 210 birds have been translocated including 76 hens, 60 males and 66 chicks. In 2019, none of the 2017 birds were still alive and only 14 of the 2018 birds (9 males and 5 females) were still alive. The overall success of the project in sustaining the North Dakota population of sage-grouse is yet to be seen.

## 4.2. Number of active leks

**Table 14.** Number and Category of Leks in Montana between 2015-2020

| Year | Confirmed Active* | Confirmed Inactive | Confirmed Extirpated | Provisionally Active | Never Confirmed Active | Unconfirmed | Total |
|---|---|---|---|---|---|---|---|
| **2015** | 988 | 172 | 65 | - | 242 | 269 | 1736 |
| **2016** | 993 | 185 | 66 | - | 255 | 270 | 1769 |
| **2017** | 1009 | 199 | 66 | - | 251 | 280 | 1805 |
| **2018** | 1012 | 220 | 66 | 3 | 260 | 255 | 1813 |
| **2019** | 1019 | 232 | 66 | 3 | 266 | 249 | 1832 |
| **2020** | 998 | 264 | 66 | 3 | 273 | 237 | 1841 |

* Montana Fish Wildlife and Parks - Lek Status Definitions

**Confirmed Active** - Data supports existence of lek. Supporting data defined as 1 year with two or more males lekking on site followed by evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) within 10 years of that observation.

**Confirmed Inactive** - A Confirmed Active lek with no evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) for the last 10 years. Requires a minimum of 3 survey years with no evidence of lekking during a 10-year period. Reinstating Confirmed Active status requires meeting the supporting data requirements.

**Confirmed Extirpated** - Habitat changes have caused birds to permanently abandon a lek (e.g., plowing, urban development, overhead power line) as determined by the biologists monitoring the lek.

**Never confirmed active** – An Unconfirmed lek that was never confirmed active. Requires 3 or more survey years with no evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) over any period of time.

**Provisionally Active** – Preliminary data supports existence of an active lek. This status can only apply during the first year of detection. Supporting data defined as one observation with two or more males lekking on site AND sign of lekking (vegetation trampling, feather, or droppings) or followed by a second observation of two or more males lekking within the same survey year.

**Unconfirmed** - Possible lek. Grouse activity documented. Data insufficient to classify as Confirmed Active status.

Data provided to the BLM by South Dakota Game and Fish Department were limited to lek counts. For the purposes of this report, lek data were compared to the lek definitions used by FWP and is reported in table 15.

**Table 15.** Number and Lek Category (based off of Montana Fish, Wildlife and Parks definitions) in South Dakota between 2015-2020

| Year | Confirmed Active | Confirmed Inactive | Never Confirmed | Unconfirmed | Total |
|---|---|---|---|---|---|
| **2015** | 38 | 25 | 16 | 4 | 83 |
| **2016** | 38 | 27 | 18 | 6 | 89 |
| **2017** | 41 | 29 | 18 | 2 | 90 |
| **2018** | 42 | 29 | 18 | 4 | 93 |
| **2019** | 43 | 31 | 18 | 1 | 93 |
| **2020** | 43 | 31 | 18 | 1 | 93 |

North Dakota Game and Fish provided the BLM with lek counts and number of active leks. Between 2015 and 2018, the latest data available by the writing of this report, there were 6 active leks each year.

### 4.3. Population trigger summary by year

There have been no soft or hard triggers tripped in Montana/Dakotas from 2015 to 2019. Therefore, a causal factor analysis was not needed.

**Table 16.** Population Trigger Summary for BLM Montana/Dakotas from 2015-2019

| Year | Number and Location of Soft Population Triggers Tripped | Number and Location of Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | 0 | 0 | N/A |
| **2016** | 0 | 0 | N/A |
| **2017** | 0 | 0 | N/A |
| **2018** | 0 | 0 | N/A |
| **2019** | 0 | 0 | N/A |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed using the best available rangewide data, at a minimum, for the four factors described above with additional information provided by each BLM state office as available. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allowed the BLM to generate this monitoring summary that is consistent across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the LUP Habitat Objectives Tables by seasonal habitat.

   ***Nesting and Early Brood-Rearing Seasonal Habitat***
   Across all LUPs, plots within PHMA and GHMA met the desired condition for sage brush cover 48% and 43% of the time, respectively. For sage brush height, 37% (PHMA) and 67% (GHMA) of plots

met the desired conditions. Sage brush shape was similar at 42% (PHMA) and 44% (GHMA) of plots meeting desired conditions. Perennial grass and forb cover met the desired condition metric in PHMA and GHMA at 80% and 84% of plots, respectively, while 57% of plots in PHMA met the desired condition for perennial grass and forb height and only 37% in GHMA.

Generally, Nesting and Early Brood-Rearing seasonal habitats within PHMA and GHMA in Montana/Dakotas contains sage brush that is shorter and with less cover but had adequate perennial grass and forb cover when compared to the LUP Habitat Objective Tables desired conditions.

***Late Brood-Rearing and Summer Seasonal Habitat***

Within PHMA and GHMA 51% and 44% of plots met the desired conditions for sage brush cover and 46% and 59% for sage brush height, respectively. As with nesting and early brood rearing habitats, plots within late brood rearing and summer habitats had plenty of perennial grass and forb cover with 97% (PHMA) and 98% (GHMA) of plots meeting desired conditions.

Only the Hiline area, encompassing the Glasgow, Malta, and Havre Field Offices, collected data for the preferred forb species metric and 86% and 53% of plots in PHMA and GHMA, respectively, met the desired condition of 3 or more species.

***Winter Seasonal Habitat***

Similar to the other seasonal habitats, only 40% and 45% of plots within PHMA and GHMA, respectively, met the desired condition for sage brush cover. Sage brush height was not reported for plots within winter habitat.

***Seasonal Habitat Discussion***

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/or are not a manageable component of the plant community. In some cases, past management history, drought etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within seasonal habitats or habitat management areas may fall in within nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results from the data for each habitat objective do not represent the landscape as a whole. We currently do not know what percentage of points meeting these objectives would signify good sage-grouse habitat for any seasonal habitat objectives to assess if BLM lands are meeting the objectives. Rather, the results are solely based on the percentage of monitoring plots across the seasonal habitats/HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential. In addition, the habitat objectives developed during the LUP planning process were based on the best available information at the time they were developed and were not based on actual monitoring data from the areas they were established for and may not reflect conditions favorable for sage-grouse in the LUP they were established for. The indicators do, however, provide a suite of habitat characteristics that helps inform BLM when developing and implementing management decisions and projects within sage-grouse habitat.

The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM nor are they achievable or desirable on every acre (e.g., due to ecological site potential) of designated sage-grouse Habitat Management Areas across the landscape that BLM manages.

We continue to work with researchers and agencies to improve our understanding of sage-grouse habitat to address these gaps in our knowledge. Recent research suggests that sage-grouse population trends are less responsive to short-term, fine-scale habitat conditions (which are highly variable across the range of sage-grouse in MT and vary considerably from year to year) but are sensitive to loss of habitat through disturbance and loss of native vegetation containing sagebrush when that loss is extensive and prevalent in any given landscape. Based on this measure of habitat conservation and management (Question 3), MT/DK BLM is meeting habitat objectives on BLM lands through the application of disturbance limits and management actions that constrain development in sage-grouse priority and general habitat. One fine scale measure that is concerning is the occurrence trend of annual invasive grasses in our monitoring plots and we will continue to assess where and when to initiate management actions to address it.

The Habitat Objectives Tables in the LUP's describes overall desired conditions through a set of indicators and associated benchmarks for sage-grouse seasonal habitats within the planning area. BLM Montana/Dakotas is currently partnering with USGS and Montana State University – Bozeman to develop more locally informed seasonal habitat desired conditions.

Interpretation of the data is beyond the scope of this monitoring summary report. A mosaic of vegetation communities and ecological sites occurs across the range of sage-grouse and spatial data used to delineate habitats (seasonal and/or HMAs) cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   Of the 1,059,645 acres assessed in Montana/Dakotas between 2015 and 2019 that contain sage-grouse habitat, 985,426 (93%) BLM acres are meeting, or making progress towards meeting the land health standards, while 74,219 BLM acres are not meeting land health standards and grazing was the casual factor and management has changed. These data only partially answer the question by describing the final evaluation of the land health standards in their entirety and does not specify the results of the SSS/ Wildlife standard within the group of standards.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   The monitoring and disturbance data presented in the results section of this report indicate that the amount of disturbance within the planning area has complied with the density and disturbance caps at the project level and BSU scales as described in the LUPs.

   Overall, projects completed in Montana/Dakotas did not exceed the disturbance cap and the few projects that did exceed the cap were designed to meet overall objectives for sage-grouse habitat established in our LUPs. These projects included mitigation adequate to offset the impact as required by MSGHCP. One of those projects was the Denbury pipeline. In 2018 the BLM completed an Environmental Assessment (EA) evaluating the impacts of a proposed liquid $CO_2$ collection pipeline in Powder River and Carter County, MT. The EA (DOI-BLM-MT-C020-2017-0081-EA: Denbury Resources Pipeline and Enhanced Oil Recovery (EOR) Project **https://eplanning.blm.gov/eplanning-ui/project/89883/510**) analyzed the impacts of co-locating the pipeline along existing anthropogenic disturbances where disturbances already exceeded 5% allowance caps due mainly to agricultural land conversion. Appendix H of the EA details the sage-grouse mitigation planning approach and shows that historic disturbance equated to over 7% and the proposed action only increased the disturbance by 0.18%. An alternative route, through an area where the project would have resulted in a disturbance less than the 5% cap, would have transected quality intact habitat. The decision was made to locate the

project in an area that already had lower habitat suitability, and thus contribute to the cap exceedance, rather than contribute to quality habitat degradation, an action that best met the plan objective to co-locate disturbance and avoid disturbance in undisturbed habitat. To further reduce the overall impact of the project, Denbury purchased a conservation easement on the 4,443-acre Ringling Ranch property and acquired active leases to plug and abandon 17 existing gas wells within the Hammond Gas Field which falls within RHMA habitat near the Denbury project. Overall, the project resulted in a net gain in sage-grouse habitat quality through avoidance measures and mitigation, meeting LUP requirements, even though the initial pipeline construction contributed to a disturbance cap exceedance.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The data presented in the results section indicate that since 2015, there been no hard and/or soft population triggers tripped due to population declines in Montana and South Dakota. Overall, populations seem to be stable since the plans were enacted. Further refinements in population modeling will better inform trigger evaluations in the future. Hard and soft triggers were not developed for North Dakota.

   The North Dakota sage-grouse population experienced a severe decline in 2007 due to West Nile virus and a subsequent 5% annual population decline until 2015. As described in the Results section, North Dakota Game and Fish Department is leading an effort to augment the population with sage-grouse from WY to prevent the population from becoming extirpated.

In conclusion, this appendix to the Rangewide 2020 report is an implementation monitoring report rather than an assessment of effectiveness of the conservation measures in the 2015 sage-grouse land use plans. It provides some trend information but is primarily a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 11: Nevada State Office Monitoring Report for the 2015 Nevada and Northeastern California Subregion Land Use Plan Amendment

2015–2020

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# Appendix 11: Nevada State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 11: Nevada State Office Monitoring Report for the 2015 Nevada and Northeastern California Subregion Land Use Plan Amendment

## 2015–2020

**Compiled by:**

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# Introduction

This BLM Nevada State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Monitoring Report). This appendix describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures from the Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) covered by the 2015 Great Basin Region GRSG Record of Decision (ROD). The BLM Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 strategy-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (5 questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the Nevada and Northeastern California Greater Sage-Grouse ARMPA and answers the following four questions:

1. Are the plans meeting the sage-grouse habitat objectives?
2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

The BLM Nevada monitored four factors (one factor per monitoring question) in LUP-designated sage-grouse habitat management areas within the Nevada and Northeastern California Greater Sage-Grouse ARMPA's planning area in Nevada:

- Habitat conditions, as articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)
- Land Health Standards evaluations
- Surface disturbance in PHMA and GHMA
- Sage-grouse population trends (in coordination with the Nevada Department of Wildlife (NDOW) and the Sagebrush Ecosystem Technical Team (SETT)).

BLM Nevada used the following methods for the four factors.

# 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

## 1.1. Habitat conditions statewide

The BLM National Operations Center (NOC) provided summaries of 11 indicators of importance to sage-grouse rangewide generated within Greater Sage-Grouse habitat (type I) and outside of Greater Sage-Grouse habitat (type II) on BLM lands in Nevada. These indicators are generally recognized as important components of Greater Sage-Grouse Habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Table. These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the Rangewide Monitoring report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 — **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Habitat conditions within seasonal habitats

Summaries of LMF and field-office collected AIM data were generated to evaluate how frequently quantitative habitat objectives, as detailed in the 2015 Nevada and Northeastern California GRSG ARMPA Habitat Objectives (table 2-2), were met within seasonal habitats within Habitat Management Areas. If no seasonal habitats are delineated in the LUP area, the sampling date was used to group plots in Habitat Management Areas, so each summary for that area reflects the timeframes associated with each seasonal use period identified in the Habitat Objectives Table. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. They are not weighted to represent to the overall area sampled.

## 1.3. Habitat conditions – adaptive management habitat triggers

The method used annually to determine whether soft or hard habitat triggers had been tripped used the following methodology as described in the LUP: management of Greater Sage-Grouse habitat on BLM managed lands in Nevada is consistent with the State of Nevada's **Greater Sage-Grouse Conservation Plan**.

The methods to determine triggers and the specific quantitative soft and hard triggers for the lek, lek cluster, and BSU spatial scales are identified in the USGS state-space model *Hierarchical population monitoring of greater sage-grouse (Centrocercus urophasianus) in Nevada and California—Identifying populations for management at the appropriate spatial scale*: **U.S. Geological Survey Open-File Report 2017-1089**, in the Evaluation Process Section.

## ADAPTIVE MANAGEMENT HABITAT ANALYSIS

### Habitat Trends for Warnings and Triggers

Warnings and triggers for habitat will only be evaluated at the lek cluster scale based on annual habitat loss within Habitat Management Areas (HMAs).

### Habitat Warnings and Triggers

At the lek cluster scale:

a) Habitat warnings are evaluated annually by a statewide technical team of specialists (similar to a science work group) from the BLM, Forest Service, Nevada Department of Wildlife (NDOW), Sagebrush Ecosystem Technical Team (SETT), USGS, US Fish and Wildlife Service, (USFWS), University of Nevada, Reno (UNR), and other appropriate local, state, or federal partners to determine the ecological impact and magnitude of the habitat warnings. The statewide technical team determines which habitat warnings warrant a management response or not. Within a lek cluster, habitat warnings that warrant a significant GRSG focused management response can be considered triggers and prioritized based on available science, site specific conditions (context), and ecological criteria (e.g., ecological site description, current state, resistance and resilience, state and transition models, disturbance response group, cheatgrass dominance, etc.). The statewide technical team would make a recommendation to the appropriate agency's authorizing official responsible for addressing the trigger(s).

b) Habitat triggers that had insufficient funds and resources available to implement projects will remain on the habitat trigger list and could be reprioritized in the next annual evaluation by the statewide technical team. The statewide technical team also reviews the trigger list annually and determine whether a habitat trigger remains on the list or should be removed; if inadequate funding or other resources are continually not available to implement appropriate management responses for habitat triggers, the SEC supports efforts to request additional resources.

c) If a population soft trigger is reached within a lek cluster that has a habitat trigger present, this may result in a population hard management response for that lek cluster, as determined by the statewide technical team.

## CAUSAL FACTOR ANALYSIS AND MANAGEMENT RESPONSES PROCESS

### Step 1-Assessment of GRSG Population and Habitat Conditions:

The statewide technical team and other appropriate state and federal agency partners use the processes outlined above to evaluate population and habitat data to identify population and habitat warnings and triggers that have been reached. The statewide technical team meets semi-annually during the spring and late summer or fall of each year to evaluate population data using the results of the USGS GRSG state-space model (Coates et al. 2017), habitat data from the land and resource management agencies (BLM, Forest Service, and other state and local agencies), and data sources to identify the potential for high fine or woody fuel loads that indicate a high probability for burning again. The data sources may be adapted as new information becomes available from appropriate partners. Some applicable data sources are outlined in the habitat warnings definitions section.

Habitat warnings that warrant a significant GRSG focused management response are elevated to the level of a trigger. Following the identification of habitat triggers, a list of criteria and a ranking system that considers available science, site-specific conditions (context), ecological criteria (e.g., ecological site descriptions, current ecological state, resistance and resilience, cheat grass dominance), and available resources will be used to consistently prioritize and rank habitat triggers among lek

clusters. This habitat trigger prioritization is only an initial evaluation. As the adaptive management process progresses local information and expertise is used to further refine the priority list for habitat triggers. The prioritization considers biological need, most benefit for cost, and estimated effectiveness. Questions such as the following will be assessed:

- What is the magnitude of the impact to GRSG population or habitat? (e.g., what is the current anthropogenic disturbance in the area and how will these changes impact GRSG populations or habitat?)
- Can GRSG populations or habitat recover on its own without intervention?
- What is the expected length of the recovery period?
- Can management actions planned or already in place accelerate recovery or are different actions necessary?

Once the annual population and habitat information have been assessed and triggers have been identified, the SETT provides and presents the results, at least annually, to the Sagebrush Ecosystem Council (SEC) and provides the public with an opportunity to assess the information. The SEC may choose to take action to provide further guidance into the process.

**Step 2-Determine the Causal Factor(s):**

Within four weeks (or sooner if possible) after Step 1 is completed and population and habitat triggers have been identified, the SETT will initiate an interdisciplinary team to include the appropriate land management agency, the statewide technical team, and federal, state and local agencies and partners (including but not limited to local area conservation groups, grazing permittees, and other affected authorized land users) to participate, comment, and provide input during the causal factor analysis. This group is referred to as the Adaptive Management Response Team (AMRT). The casual factor analyses at each scale are as follows:

a. Lek (population only): GRSG seasonal habitats associated with the lek. An individual lek boundary is defined as a minimum of a four-mile buffer except in cases where known seasonal habitats associated with that lek occur beyond the four-mile boundary surrounding the lek;
b. Lek cluster: GRSG seasonal habitats associated with the lek cluster. A lek cluster boundary is defined by minimal GRSG movement between clusters so demographic rates are influenced by birth/death rates rather than immigration/emigration;
c. BSU (population only): GRSG seasonal habitats associated with the BSU. A BSU boundary is defined by similar environmental conditions where GRSG population dynamics are likely more driven by larger scale variations (e.g., climate).

The causal factor(s) for habitat triggers could be wildfire, natural causes, fire risk, or anthropogenic disturbances based on the analysis conducted in Step 1. To identify the causal factor(s) of a population trigger, the AMRT considers all available information and examines potential causal factor(s). Questions to be answered may include, but are not limited to the following:

- Did factors and events outside the triggered scale contribute to the population or habitat decline? (e.g., are there previously burned areas within the lek cluster or BSU that have not recovered?)
- Did the event or outcome arise from the interaction of more than one potential causal factor(s)?
- What natural and human-caused events have occurred within the causal factor analysis area?
- What additional GRSG threats exist in the area?

Findings from the causal factor analysis process are documented in a report, which is prepared by the AMRT. The AMRT report may also include recommendations for additional analyses or data collection.

If the causal factor(s) cannot be determined, the AMRT addresses threats that were identified in this process and continues to explore opportunities for conservation in areas where impacts have occurred, when warranted.

**Step 3-Identify Appropriate Management Responses:**

The AMRT identifies and recommends appropriate management responses to be applied to the individual lek (population only), lek cluster, and/or BSU (population only) that reached a trigger. Recommended management responses should be included in the AMRT report.

Management responses are only applied within HMAs. Both reactive and proactive management responses can be applied to address existing or anticipated threats in areas where warnings or triggers have been reached. In either case they should be strategically targeted to address the causal factor(s) of the existing disturbance or to address similar threats that led to a warning or trigger within a lek, lek cluster, or BSU. This plan identifies two main response groups to address fine and woody fuel loads that may require different management responses with varying spatial and temporal scales associated with the response.

1) Short term management – Identify areas of high fine fuel loads that would benefit from targeted grazing (e.g., season specific grazing, fuel break maintenance, etc.) of annual grasses and other fuels management.
2) Long term management – Identify areas of high woody fuel loads to strategically target areas for appropriate fuel breaks and vegetation treatments to better manage wildfires.

From: **Greater Sage-grouse Adaptive Management Process – Population and Habitat**

Note that these methods apply to this specific BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the **Biologically Significant Unit** (BSU) scale.

## 2. Land Health Standards (LHS) Evaluations

Summarized data for allotments that contain any sage-grouse habitat in the planning area was used to address this factor. This data is summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in two categories:

### 2.1. BLM acres of Category A allotments that contain SG habitat

All LHS are achieved or significant progress toward achieving is being made.

### 2.2. BLM acres of Category B allotments that contain SG habitat

These are not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress towards achieving LHS.

## 3. Surface Disturbance in PHMA and GHMA

The methods used to track the number of BLM-authorized surface disturbing actions in GRSG PHMA and GHMA within the planning area and to calculate the amount of disturbance associated with each proposal prior to authorization are:

On June 23, 2016, BLM Nevada issued **Instruction Memorandum 2016-038** which provided direction to BLM Nevada field and district offices on reporting proposed activities in Greater Sage-Grouse habitat management areas. It also outlined the process for pursuing variances to the no surface occupancy (NSO) stipulation and the disturbance cap management protocols outlined in the 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan (SGPA).

Field/district offices were required to notify the BLM Nevada State Office of proposed activities in GRSG habitat management areas to assist with tracking the implementation and effectiveness of the 2015 SGPA. The field/district offices were to notify the BLM Nevada State Office by submitting a completed Form for Proposed Activities in Greater Sage-Grouse (GRSG) Habitat Management Areas. Along with submission of the GRSG form, the field/district offices had to provide a PDF map of the proposed activity/project area, a completed Required Design Features worksheet, and GIS data (shapefiles) of the proposed activity.

In Nevada, the SGPA imposed a 3% disturbance limit on lands designated as PHMAs. The Disturbance Management Protocol (DMP) providing for the 3% limitation on disturbance is applied at both the project and BSU scales, except in situations where a biological analysis indicated a net conservation gain to the species is possible even if the cap is exceeded.

The NVSO calculates the disturbance cap for the project level. The BSU estimation level calculation is done by the BLM National Operations Center (NOC) and verified by the NVSO. The NVSO would populate both the project level and BSU portions of the GRSG form. The NVSO completes this analysis and email the GRSG form back to the field/district office to complete the remainder of the form.

For the field/district office to determine if the proposed activity in PHMA is in conformance with the SGPA, the field/district office would interpret the NVSO's disturbance cap calculation at both the project area and BSU scales. These disturbance calculations would also inform the NEPA analysis process for the proposed activity. Therefore, the field/district office could submit multiple maps and shapefiles with the GRSG form to account for each alternative that contains modifications to the proposed activity's boundaries. These materials would allow the NVSO to run the disturbance cap calculation for all the alternatives at once. The NVSO uses SDARTT to track surface disturbances on BLM managed public lands.

For nondiscretionary activities that cause on-the-ground impacts or where the proponent has a valid existing right to create new or additional disturbance, the disturbance cap is waived; however, the disturbance still must be calculated and disclosed (specifically for NEPA analysis purposes). BLM also is required to calculate the disturbance for nondiscretionary activities and where the proponent has a valid existing right because those projects would still count towards the disturbance caps and could affect BLM decisions on future proposed discretionary actions.

Between 2015 and 2019, the BLM Nevada State Office received:

- 295 forms for activities in PHMA of which 105 projects are included in table 20;
- 219 forms for activities in GHMA of which 113 projects are included in table 20;
- 128 forms for activities in OHMA.

Note that the methods previously described apply at the project scale. The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.

## 4. Sage-Grouse Population Trends (in cooperation with the Nevada Department of Wildlife)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following LUP-defined methodology:

**ADAPTIVE MANAGEMENT POPULATION ANALYSIS**

**Population Rate of Change Calculation for Triggers**

The USGS GRSG state-space model (Coates et al. 2017) is used to estimate the rate of GRSG population change (lambda) and the number of males at three hierarchically nested spatial scales: individual lek, lek cluster, and BSU. Lek count data provided by Nevada Department of Wildlife (NDOW) informs the state-space model and to determine thresholds for population stability and decoupling from higher-order scales. Some lek clusters may need additional monitoring of leks to gain adequate sampling data to be modeled (Coates et al. 2017).

In addition to analyzing annual trend data, the benefit of using the USGS state-space model is that it differentiates whether a population decline is likely due to localized disturbances that may be more manageable, or connected to a larger scale, regional environmental or climactic conditions that are typically less manageable. A trigger is less likely to be reached at smaller spatial scales (e.g., lek, lek cluster) if regional environmental (e.g., BSU) conditions are influencing population decline (Figure 1). Scenarios depicting population stability (trend) and decoupling from the higher-order spatial scales (Coates et al. 2017). A population that is destabilized and decoupled is considered a warning at that spatial scale. Multiple annual warnings are required to reach a soft or hard population trigger.). The framework also accounts for natural variations in populations, which will allow managers to target populations that can be most affected by adaptive management responses.

**Population Soft and Hard Triggers**

On an annual basis as lek data are finalized by Nevada Department of Wildlife (NDOW), the U.S. Geological Survey (USGS) Greater Sage-Grouse (GRSG) state-space model is used to establish population rates of change at the lek, lek cluster, and BSU levels. The rate at which a population trend destabilizes (population decline) and decouples from the trend at the associated higher-order scale dictates whether or not a soft or hard trigger is reached. Thresholds for stability and decoupling for soft and hard triggers were determined from simulation analyses that used 17 years of lek data (2000- 2016). These simulations estimated the range of values where management actions would have an effect on stabilizing population change or synchronizing decoupled scales. The threshold value for each criteria represents the most likely threshold value (from a range of values), that if crossed, would associate most strongly with continued decline or decoupling if management action is not taken (Coates et al. 2017).

The methods to determine triggers and the specific quantitative soft and hard triggers for the lek, lek cluster, and BSU spatial scales are identified in the USGS state-space model *Hierarchical population monitoring of greater sage-grouse (Centrocercus urophasianus) in Nevada and California—Identifying populations for management at the appropriate spatial scale*: **U.S. Geological Survey Open-File Report 2017-1089**, in the Evaluation Process Section.

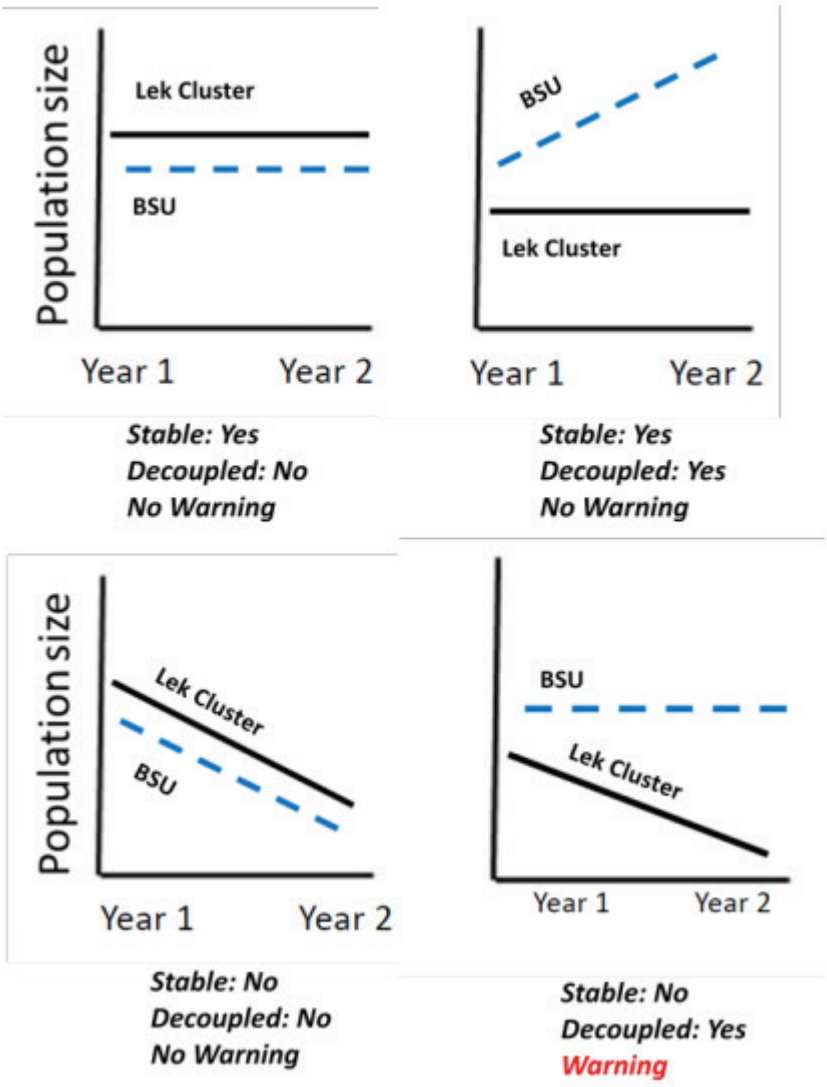



**Figure 1.** Scenarios depicting population stability (trend) and decoupling from the higher-order spatial scales (Coates et al. 2017). A population that is destabilized and decoupled is considered a warning at that spatial scale. Multiple annual warnings are required to reach a soft or hard population trigger.

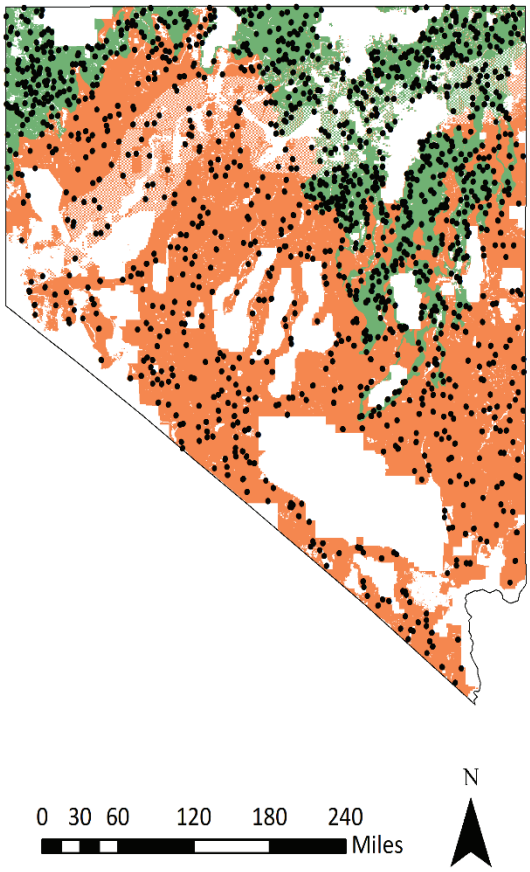
# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance in PHMA and GHMA, and sage-grouse population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses

#### 1.1.1. Nevada Plot Locations Used to Derive Statewide Estimates




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | NV | 333 | 12,890,123 |
| 2013 | II | NV | 196 | 32,073,620 |
| 2014 | I | NV | 311 | 12,550,474 |
| 2014 | II | NV | 211 | 33,223,428 |
| 2015 | I | NV | 321 | 12,585,894 |
| 2015 | II | NV | 173 | 31,274,877 |
| 2016 | I | NV | 324 | 12,166,972 |
| 2016 | II | NV | 192 | 30,926,187 |
| 2017 | I | NV | 225 | 12,481,024 |
| 2017 | II | NV | 150 | 30,843,651 |
| 2018 | I | NV | 225 | 11,947,503 |
| 2018 | II | NV | 145 | 29,305,196 |

**Figure 2.** Nevada habitat conditions for type I (BLM lands within sage-grouse habitat) and type II (BLM rangelands outside of sage-grouse habitat) and summary table of number of BLM sample points and BLM acres.

**1.1.2.** Additional indicators that will be provided for habitat (type I) and nonhabitat (type II) within the state: percent foliar cover of sagebrush; percent foliar cover of perennial grasses and forbs; mean sagebrush height (inches); mean herbaceous plant height (inches); percent of sagebrush cover that is columnar in sagebrush shape; percent of sagebrush cover that is spreading in sagebrush shape; percent of areas with invasive plant species present; percent foliar cover of annual grasses; percent cover of bare ground.

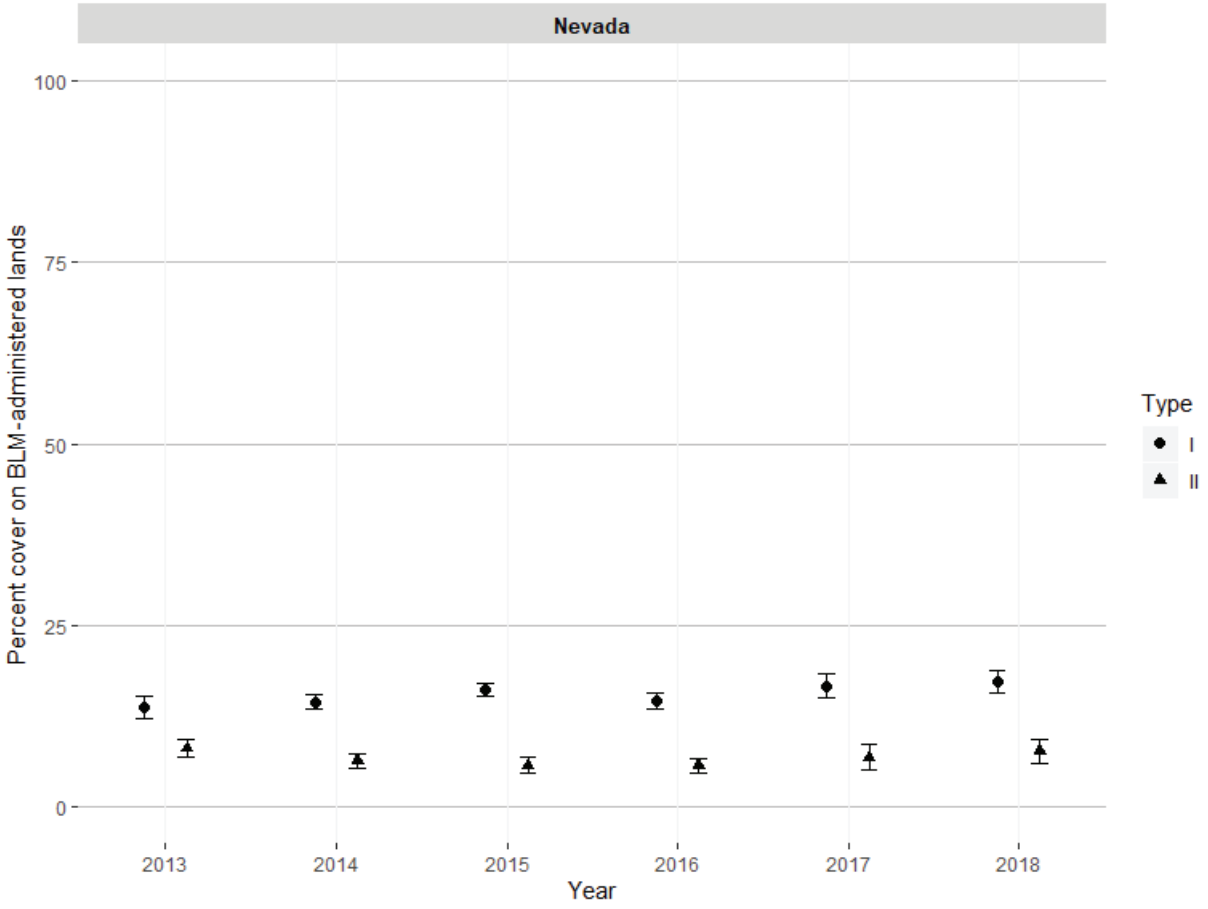



**Figure 3.** Percent cover of sagebrush on BLM Nevada rangelands (80% confidence interval).

**Table 1.** Percent Cover of Sagebrush on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 14% (+1/-1) | 333 | 8% (+1/-1) | 196 |
| **2014** | 14% (+1/-1) | 311 | 6% (+1/-1) | 211 |
| **2015** | 16% (+1/-1) | 321 | 6% (+1/-1) | 173 |
| **2016** | 15% (+1/-1) | 324 | 6% (+1/-1) | 192 |
| **2017** | 17% (+2/-2) | 225 | 7% (+2/-2) | 150 |
| **2018** | 17% (+2/-2) | 225 | 8% (+2/-2) | 145 |

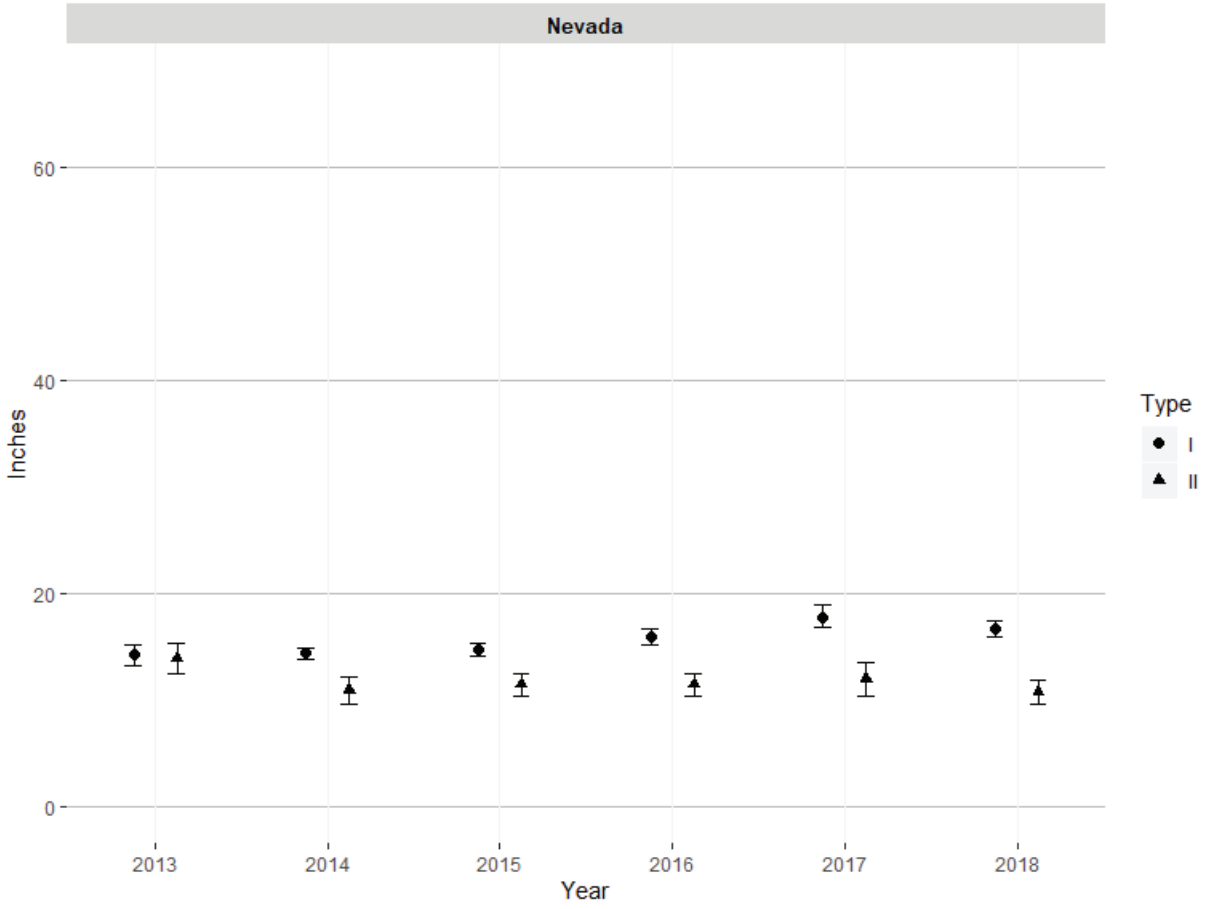



**Figure 4.** Mean sagebrush species height in inches on BLM Nevada rangelands (80% confidence interval).

**Table 2.** Mean Sagebrush Species Height in Inches on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 14.28 inches (+0.93/-0.93) | 333 | 13.96 inches (+1.39/-1.39) | 196 |
| **2014** | 14.48 inches (+0.53/-0.53) | 311 | 10.93 inches (+1.27/-1.26) | 211 |
| **2015** | 14.74 inches (+0.61/-0.61) | 321 | 11.49 inches (+1.06/-1.06) | 173 |
| **2016** | 16 inches (+0.8/-0.8) | 324 | 11.49 inches (+1.09/-1.09) | 192 |
| **2017** | 17.87 inches (+1.06/-1.05) | 225 | 12 inches (+1.58/-1.58) | 150 |
| **2018** | 16.78 inches (+0.77/-0.77) | 225 | 10.8 inches (+1.08/-1.07) | 145 |

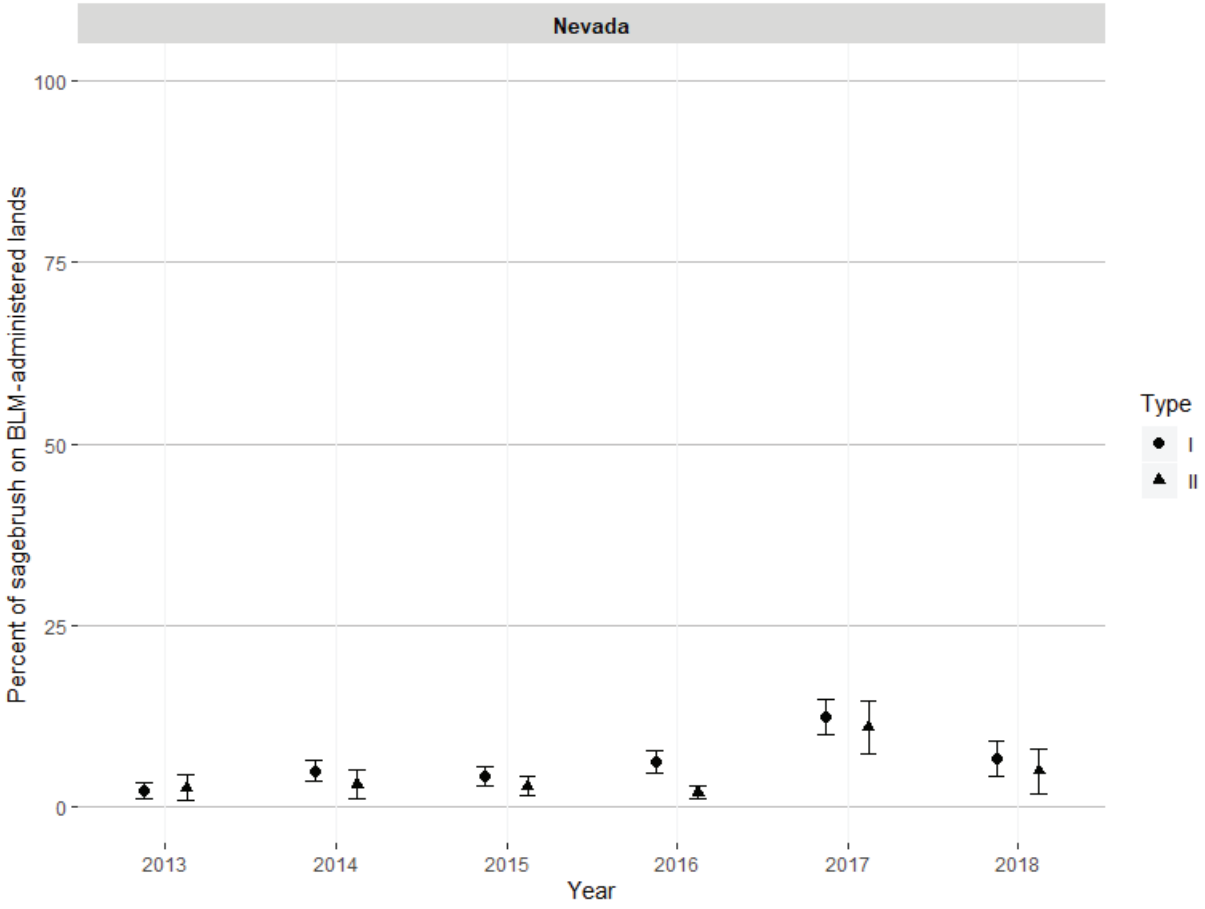



**Figure 5.** Proportion of sagebrush that is columnar shaped on BLM Nevada rangelands (80% confidence interval).

**Table 3.** Proportion of Sagebrush that is Columnar Shaped on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 2% (+1/-1) | 333 | 3% (+2/-2) | 196 |
| **2014** | 5% (+2/-2) | 311 | 3% (+2/-2) | 211 |
| **2015** | 4% (+1/-1) | 321 | 3% (+1/-1) | 173 |
| **2016** | 6% (+2/-2) | 324 | 2% (+1/-1) | 192 |
| **2017** | 12% (+2/-2) | 225 | 11% (+4/-4) | 150 |
| **2018** | 7% (+2/-2) | 225 | 5% (+3/-3) | 145 |

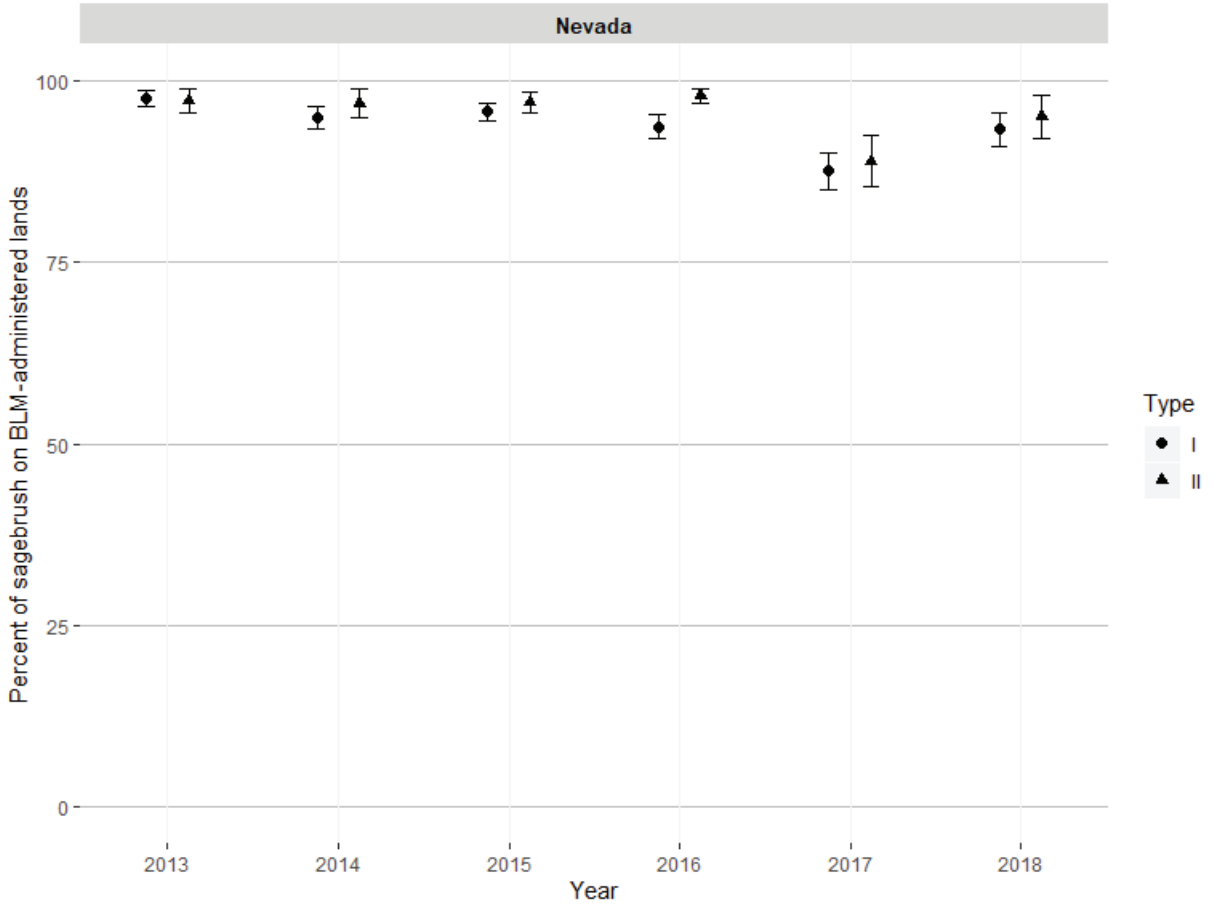



**Figure 6.** Proportion of sagebrush that is spreading shaped on BLM Nevada rangelands (80% confidence interval).

**Table 4.** Proportion of Sagebrush that is Spreading Shaped on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 98% (+1/-1) | 333 | 97% (+2/-2) | 196 |
| **2014** | 95% (+2/-2) | 311 | 97% (+2/-2) | 211 |
| **2015** | 96% (+1/-1) | 321 | 97% (+1/-1) | 173 |
| **2016** | 94% (+2/-2) | 324 | 98% (+1/-1) | 192 |
| **2017** | 88% (+2/-2) | 225 | 89% (+4/-4) | 150 |
| **2018** | 93% (+2/-2) | 225 | 95% (+3/-3) | 145 |

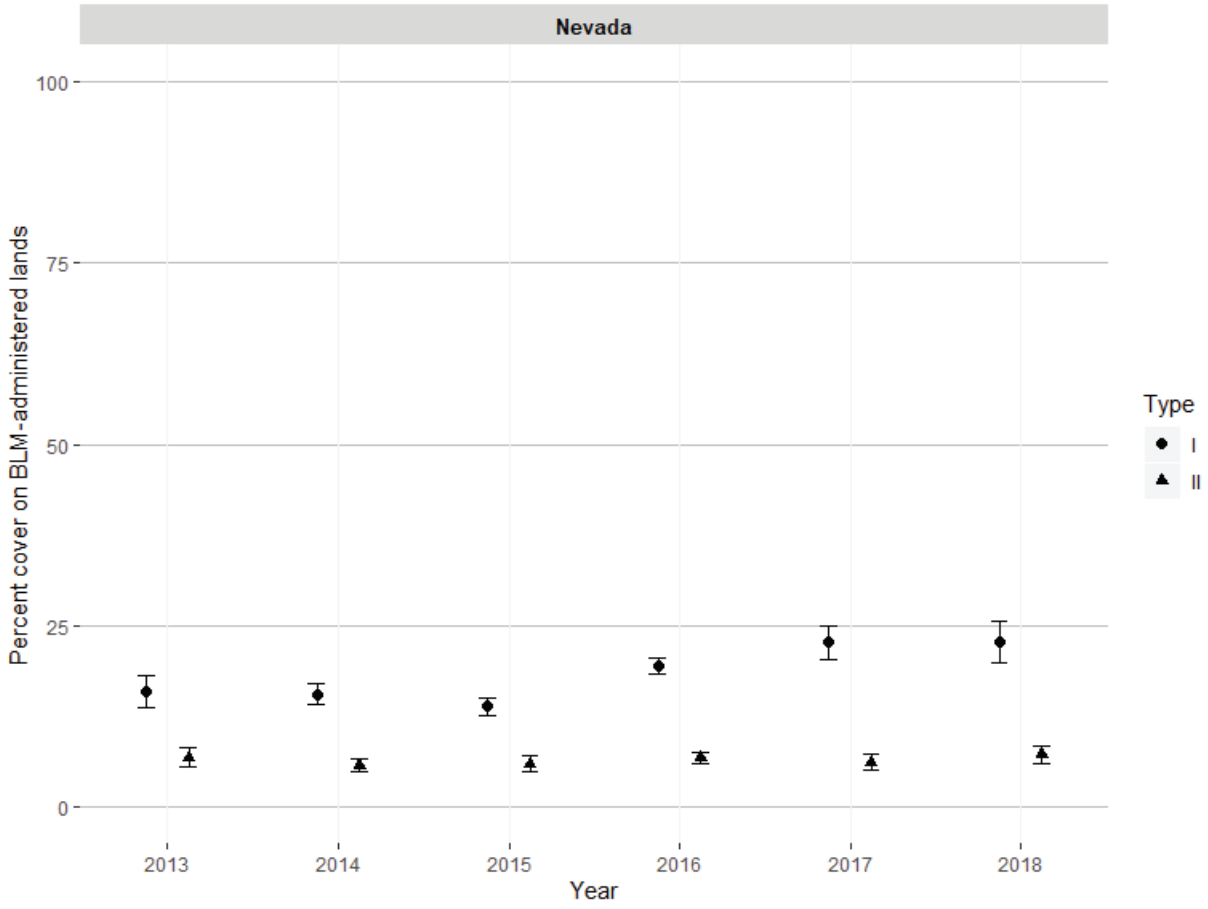



**Figure 7.** Percent cover of perennial grasses and perennial forbs on BLM Nevada rangelands (80% confidence interval).

**Table 5.** Percent Cover of Perennial Grasses and Perennial Forbs on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 16% (+2/-2) | 333 | 7% (+1/-1) | 196 |
| **2014** | 16% (+1/-1) | 311 | 6% (+1/-1) | 211 |
| **2015** | 14% (+1/-1) | 321 | 6% (+1/-1) | 173 |
| **2016** | 19% (+1/-1) | 324 | 7% (+1/-1) | 192 |
| **2017** | 23% (+2/-2) | 225 | 6% (+1/-1) | 150 |
| **2018** | 23% (+3/-3) | 225 | 7% (+1/-1) | 145 |

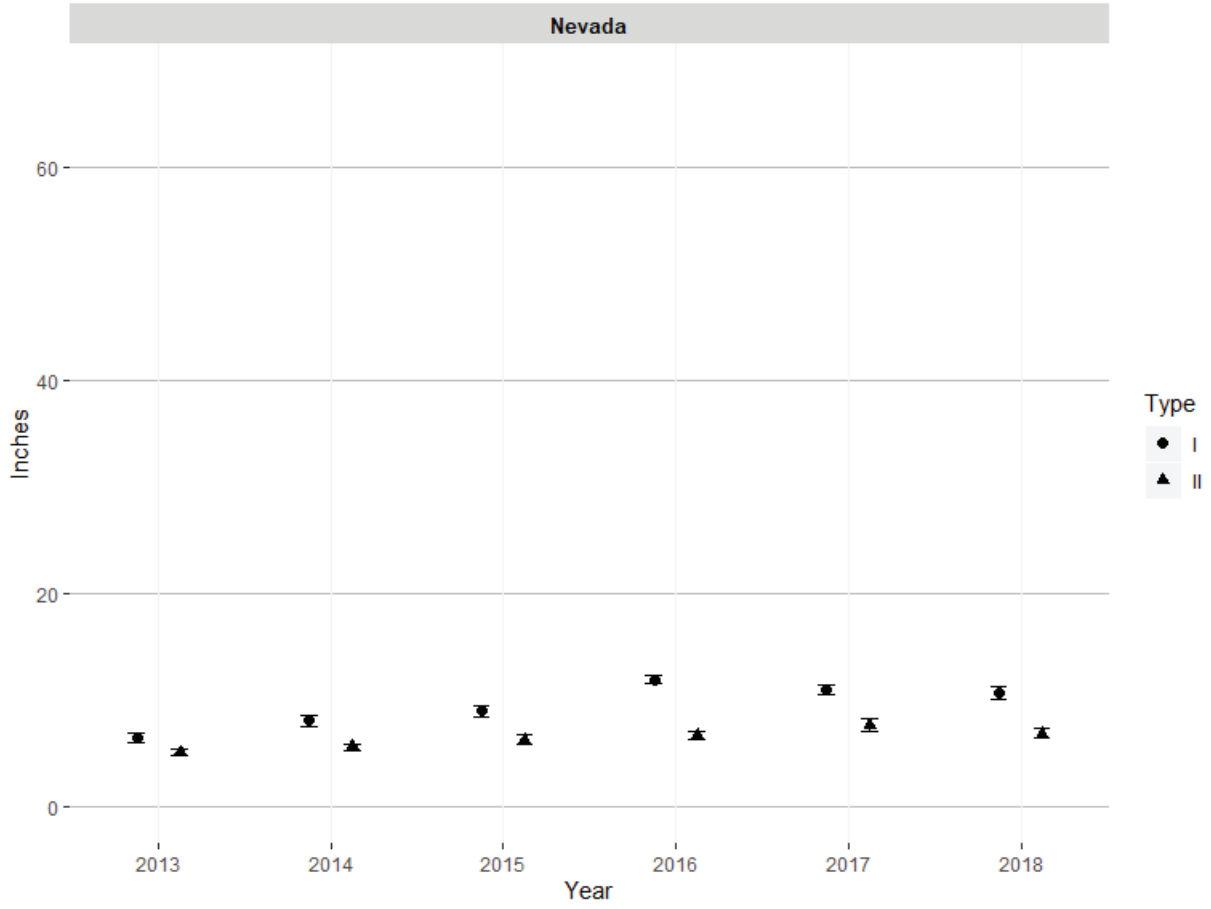



**Figure 8.** Mean herbaceous plant species height in inches on BLM Nevada rangelands (80 confidence interval).

**Table 6.** Mean Herbaceous Plant Species Height in Inches on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 6.51 inches (+0.41/-0.41) | 333 | 5.2 inches (+0.29/-0.3) | 196 |
| **2014** | 8.1 inches (+0.5/-0.51) | 311 | 5.67 inches (+0.3/-0.29) | 211 |
| **2015** | 9.02 inches (+0.51/-0.51) | 321 | 6.32 inches (+0.43/-0.43) | 173 |
| **2016** | 11.98 inches (+0.4/-0.4) | 324 | 6.72 inches (+0.42/-0.42) | 192 |
| **2017** | 11 inches (+0.41/-0.42) | 225 | 7.7 inches (+0.57/-0.57) | 150 |
| **2018** | 10.77 inches (+0.59/-0.59) | 225 | 6.95 inches (+0.48/-0.48) | 145 |

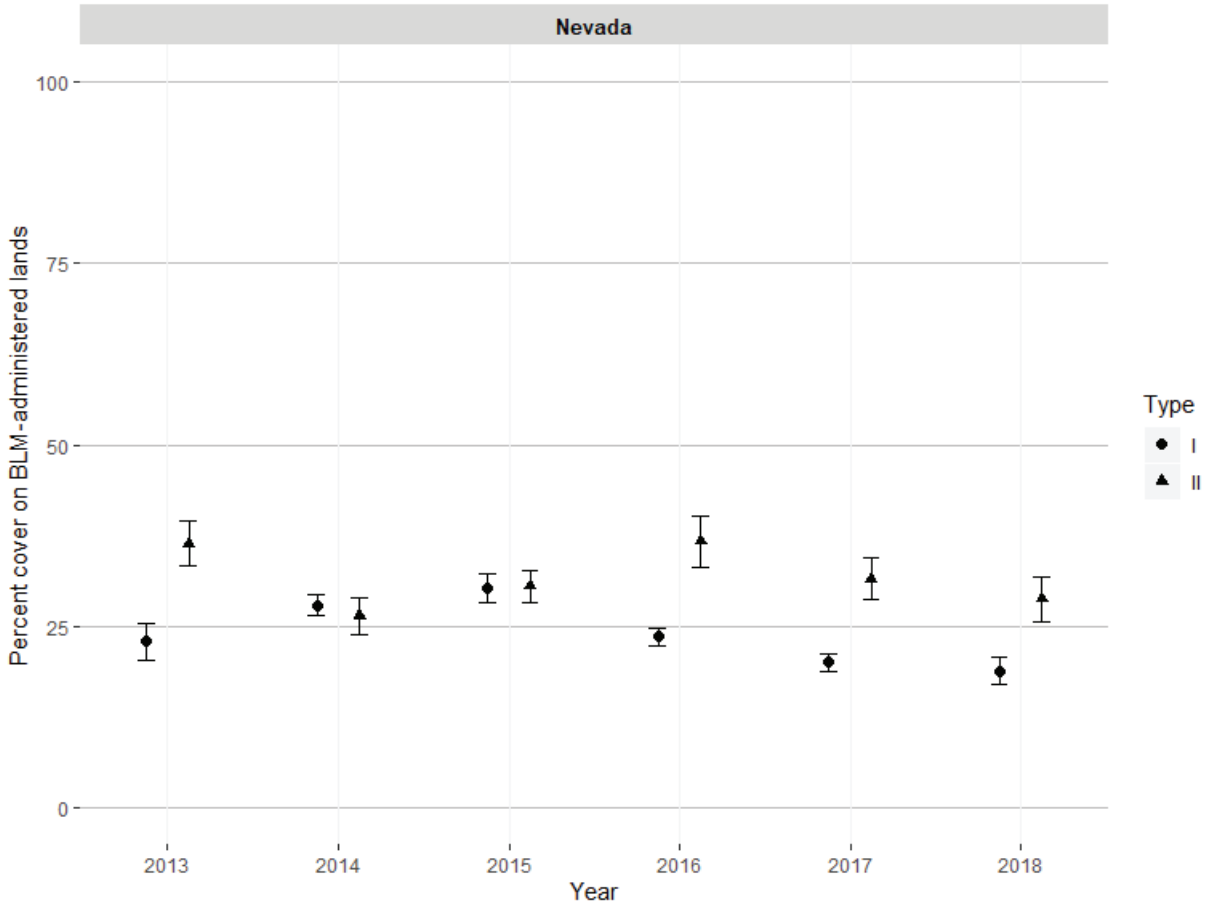



**Figure 9.** Percent cover of bare ground on BLM Nevada rangelands (80% confidence interval).

**Table 7.** Percent Cover of Bare Ground on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 23% (+2/-2) | 333 | 36% (+3/-3) | 196 |
| **2014** | 28% (+1/-1) | 311 | 26% (+3/-3) | 211 |
| **2015** | 30% (+2/-2) | 321 | 31% (+2/-2) | 173 |
| **2016** | 24% (+1/-1) | 324 | 37% (+4/-4) | 192 |
| **2017** | 20% (+1/-1) | 225 | 32% (+3/-3) | 150 |
| **2018** | 19% (+2/-2) | 225 | 29% (+3/-3) | 145 |

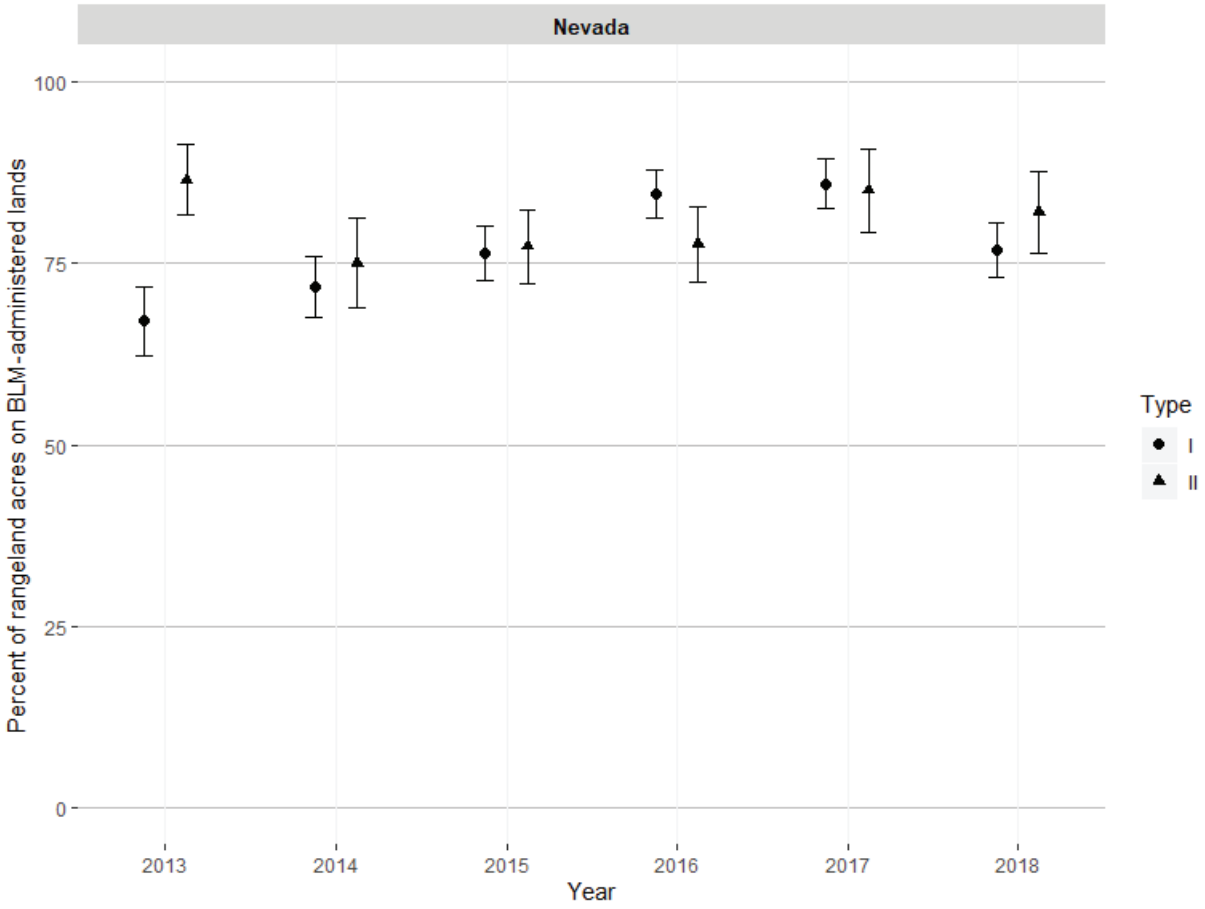



**Figure 10.** Proportion of BLM Nevada rangelands with nonnative invasive species present (80% confidence interval).

**Table 8.** Proportion of Vegetation Composed of Nonnative Invasive Plant Species on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 8% (+2/-2) | 333 | 20% (+4/-4) | 196 |
| **2014** | 11% (+2/-2) | 311 | 14% (+2/-2) | 211 |
| **2015** | 15% (+2/-2) | 321 | 11% (+3/-3) | 173 |
| **2016** | 18% (+2/-2) | 324 | 20% (+4/-4) | 192 |
| **2017** | 22% (+2/-2) | 225 | 26% (+5/-5) | 150 |
| **2018** | 21% (+3/-3) | 225 | 23% (+5/-5) | 145 |

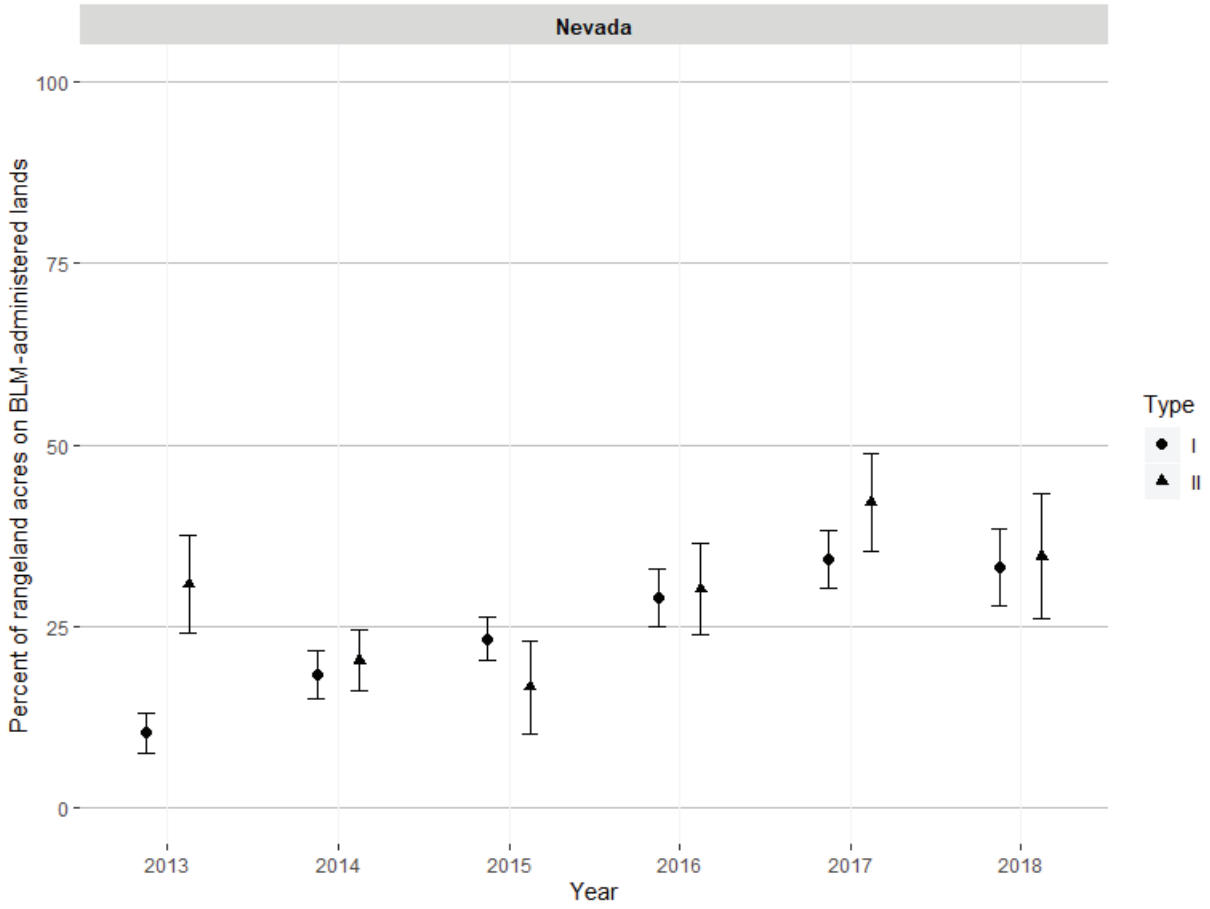



**Figure 11.** Proportion of BLM Nevada rangelands where nonnative invasive species are abundant (>= 25%) (80% confidence interval).

**Table 9.** Proportion of BLM Nevada Rangelands Where >= 25% of Foliar Cover is Comprised of Nonnative Invasive Species (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 10% (+3/-3) | 333 (62) | 31% (+7/-7) | 196 (65) |
| **2014** | 18% (+3/-3) | 311 (56) | 20% (+4/-4) | 211 (48) |
| **2015** | 23% (+3/-3) | 321 (75) | 17% (+6/-6) | 173 (31) |
| **2016** | 29% (+4/-4) | 324 (75) | 30% (+6/-6) | 192 (63) |
| **2017** | 34% (+4/-4) | 225 (75) | 42% (+7/-7) | 150 (63) |
| **2018** | 33% (+5/-5) | 225 (71) | 35% (+9/-9) | 145 (51) |

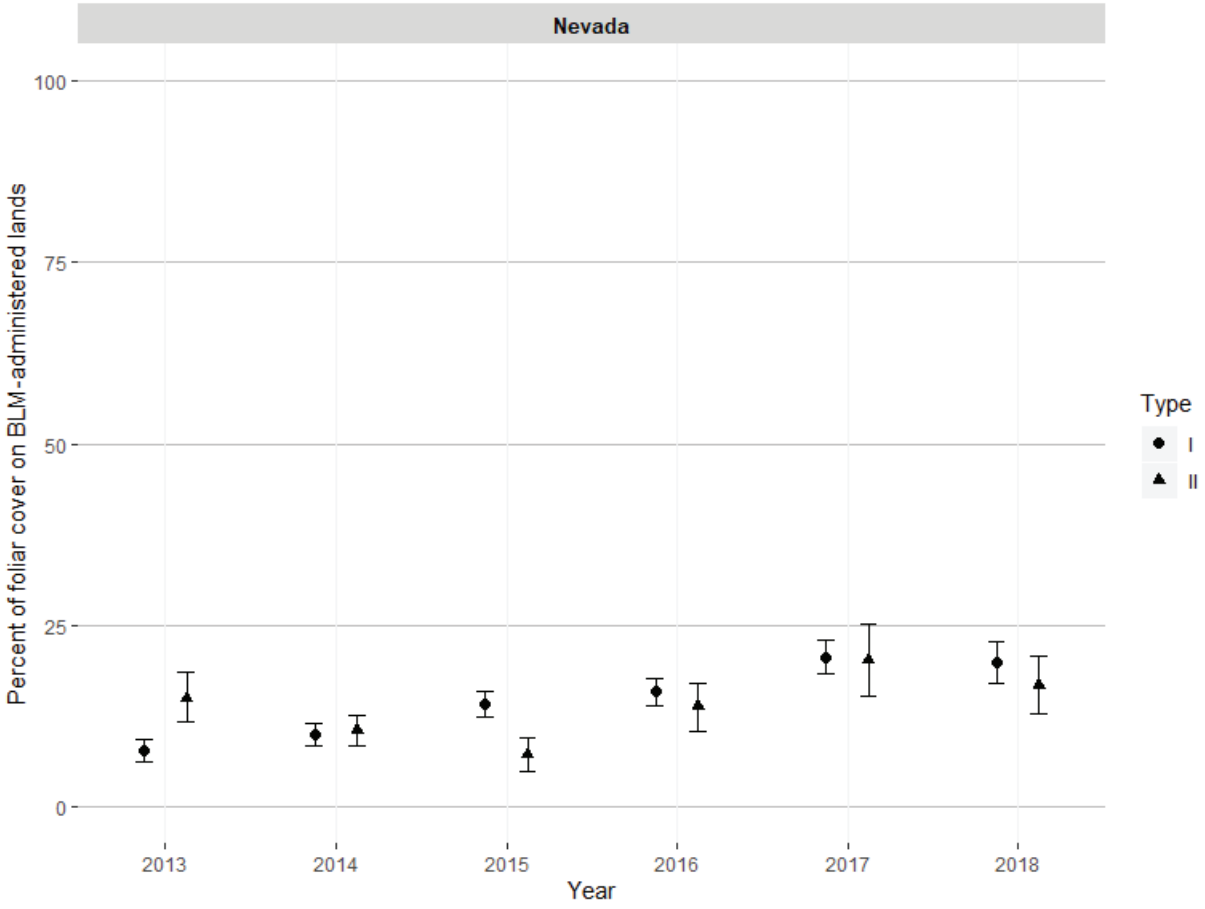



**Figure 12.** Proportion of vegetation composed of annual grasses on BLM rangelands (80% confidence interval).

**Table 10.** Proportion of Vegetation Composed of Annual Grasses on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 8% (+2/-2) | 333 | 15% (+3/-3) | 196 |
| **2014** | 10% (+2/-2) | 311 | 11% (+2/-2) | 211 |
| **2015** | 14% (+2/-2) | 321 | 7% (+2/-2) | 173 |
| **2016** | 16% (+2/-2) | 324 | 14% (+3/-3) | 192 |
| **2017** | 21% (+2/-2) | 225 | 20% (+5/-5) | 150 |
| **2018** | 20% (+3/-3) | 225 | 17% (+4/-4) | 145 |

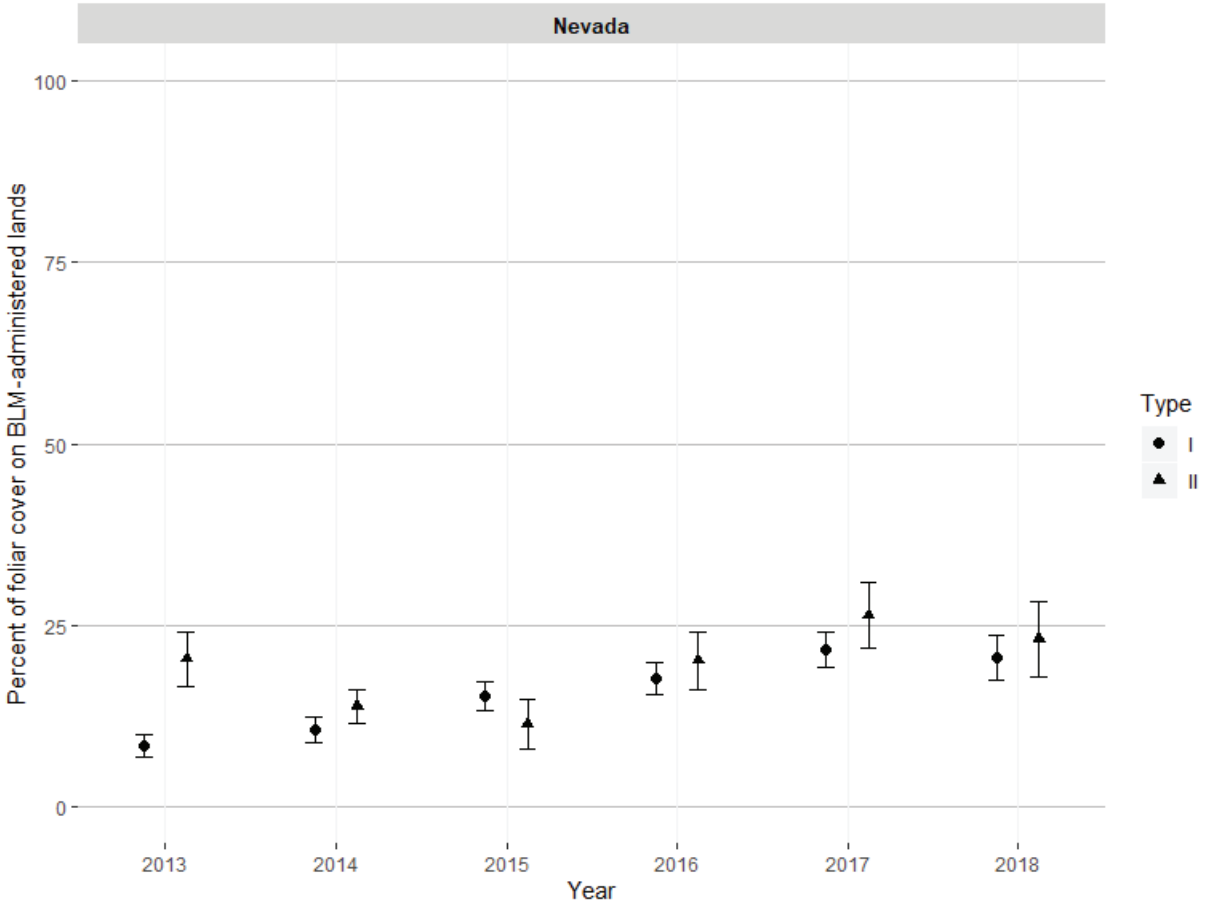



**Figure 13.** Proportion of vegetation composed of nonnative invasive plant species on BLM Nevada rangelands (80% confidence interval).

**Table 11.** Proportion of Vegetation Composed of Nonnative Invasive Plant Species on BLM Nevada Rangelands (80% confidence interval)

| Year | Type I (within GRSG Habitat) | | Type II (outside GRSG Habitat) | |
|---|---|---|---|---|
| | Value (+/- 80% CI) | Sample Size | Value (+/- 80% CI) | Sample Size |
| **2013** | 67% (+5/-5) | 333 (263) | 87% (+5/-5) | 196 (165) |
| **2014** | 72% (+4/-4) | 311 (223) | 75% (+6/-6) | 211 (162) |
| **2015** | 76% (+4/-4) | 321 (246) | 77% (+5/-5) | 173 (134) |
| **2016** | 85% (+3/-3) | 324 (193) | 78% (+5/-5) | 192 (128) |
| **2017** | 86% (+3/-3) | 225 (193) | 85% (+6/-6) | 150 (128) |
| **2018** | 77% (+4/-4) | 225 (173) | 82% (+6/-6) | 145 (119) |

**1.1.3.** Additional indicators that will be provided for habitat (type I) and nonhabitat (type II) within the state: percent foliar cover of sagebrush; percent foliar cover of perennial grasses and forbs; mean sagebrush height (inches); mean herbaceous plant height (inches); percent of sagebrush cover that is columnar in sagebrush shape; percent of sagebrush cover that is spreading in sagebrush shape; percent of areas with invasive plant species present; percent foliar cover of annual grasses; percent cover of bare ground

## 1.2. Habitat conditions within seasonal habitat areas

The summaries below reflect data collected within GRSG habitat in identified in the 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment. The summaries count and categorize monitoring locations as meeting, not meeting, or data not collected for each of the quantifiable indicators found in the Habitat Objectives of the 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment. The indicator values shown in the Habitat Objectives Table (table 2-2 of the 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment) describe the desired conditions across the broad landscape based on best available science at the time of publication of the 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment regarding Greater Sage-Grouse (GRSG) habitat use.

Collectively, the vegetation indicators for sagebrush (cover, height, and shape), perennial grasses, perennial forbs (cover, height, and/or availability), and others found in the Habitat Objectives Table represent the vegetation components associated with each seasonal habitat area. Not all locations within a given seasonal habitat area will be able to achieve the indicator values in the Habitat Objectives Table due to the inherent variation in vegetation communities and ecological site potential as well as environmental factors such as drought or fire. Monitoring locations where one or more objectives are not met may or may not be providing suitable sage-grouse seasonal habitat; these summaries do not include an interpretation of the site-scale metrics which collectively inform habitat suitability. Habitat suitability is appropriately evaluated through the processes outlined in the **Sage-Grouse Habitat Assessment Framework** and supplemental training materials developed by the BLM. These include guidance on the interpretation of these data (i.e., indicator values) and other information collected within GRSG habitat. Finally, the data aggregated for this summary represent many different sample designs with various sample intensities and monitoring objectives; thus, they may not reliably represent conditions in all locations. (tables 12 through 16)

### 1.2.1. Habitat Objectives Summary Tables

**Table 12.** Sage-Grouse Breeding Season (Spring) Habitat Indicators in Priority Habitat Management Areas (PHMA) in Nevada

| Nesting Early Brood-Rearing (Spring) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Suitable | | Monitoring Locations Not Suitable | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥20% | 184 | 27.8 | 477 | 72.2 | 0 | 0 | 661 | 100 |
| Perennial Grass Cover | ≥10% | 422 | 63.8 | 239 | 36.2 | 0 | 0 | 661 | 100 |
| Annual Grass Cover | <5% | 343 | 51.9 | 318 | 48.1 | 0 | 0 | 661 | 100 |
| Total Shrub Cover | ≥30% | 128 | 19.4 | 533 | 80.6 | 0 | 0 | 661 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | Provide overhead and lateral concealment from predators | 0 | 0 | 452 | 100 | 0 | 0 | 452 | 100 |
| Proximity of Tall Structures (1 m above shrub height) | 3 miles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., proximity of tall structures because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance.

**Table 13.** Sage-Grouse Breeding Season (Spring) Habitat Indicators in General Habitat Management Areas (GHMA) in Nevada

| Nesting Early Brood-Rearing (Spring) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Suitable | | Monitoring Locations Not Suitable | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥20% | 64 | 22 | 227 | 78 | 0 | 0 | 291 | 100 |
| Perennial Grass Cover | ≥10% | 141 | 48.5 | 150 | 51.5 | 0 | 0 | 291 | 100 |
| Annual Grass Cover | <5% | 157 | 54 | 134 | 46 | 0 | 0 | 291 | 100 |
| Total Shrub Cover | ≥30% | 50 | 17.2 | 241 | 82.8 | 0 | 0 | 291 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | Provide overhead and lateral concealment from predators | 0 | 0 | 194 | 100 | 0 | 0 | 194 | 100 |
| Proximity of Tall Structures (1 m above shrub height) | 3 miles | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., proximity of tall structures because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance.

**Table 14.** Sage-Grouse Breeding Season (Spring) Habitat Indicators in Other Habitat Management Areas (OHMA) in Nevada

| Nesting Early Brood-Rearing (Spring) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Suitable | | Monitoring Locations Not Suitable | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | ≥20% | 27 | 16.8 | 134 | 83.2 | 0 | 0 | 161 | 100 |
| Perennial Grass Cover | ≥10% | 68 | 42.2 | 93 | 57.8 | 0 | 0 | 161 | 100 |
| Annual Grass Cover | <5% | 67 | 41.6 | 94 | 58.4 | 0 | 0 | 161 | 100 |
| Total Shrub Cover | ≥30% | 22 | 13.7 | 139 | 86.3 | 0 | 0 | 161 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | Provide overhead and lateral concealment from predators | 0 | 0 | 110 | 100 | 0 | 0 | 110 | 100 |
| Proximity of Tall Structures (1 m above shrub height) | 3 miles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., proximity of tall structures because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance.

**Table 15.** Sage-Grouse Breeding Season (Summer) Habitat Indicators in Priority, General, and Other Habitat Management Areas (PHMA) in Nevada

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Suitable** | | **Monitoring Locations Not Suitable** | | **Monitoring Locations Where Indicator Not Measured[1]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 10-25% | 777 | 37.8 | 1278 | 62.2 | 0 | 0 | 2055 | 100 |
| Perennial Grass and Forb cover | >15% | 1264 | 61.5 | 791 | 38.5 | 0 | 0 | 2055 | 100 |
| Deep-rooted Perennial Bunchgrass Height | 7 inches | 1159 | 84.7 | 209 | 15.3 | 0 | 0 | 1368 | 100 |
| Perennial Forb Cover | ≥5% arid ≥15% mesic | 117 | 5.7 | 1938 | 94.4 | 0 | 0 | 2055 | 100 |
| Preferred Forb Availability | High Species Richness | 0 | 00 | | 0 | 0 | 0 | 0 | 0 |
| Riparian and/or Meadow Habitat Stability | PFC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 10-25% | 271 | 36.4 | 474 | 63.3 | 0 | 0 | 745 | 100 |
| Perennial Grass and Forb cover | >15% | 297 | 39.9 | 448 | 60.1 | 0 | 0 | 745 | 100 |
| Deep-rooted Perennial Bunchgrass Height | 7 inches | 325 | 75.4 | 106 | 24.6 | 0 | 0 | 431 | 100 |
| Perennial Forb Cover | ≥5% arid ≥15% mesic | 19 | 2.6 | 726 | 97.4 | 0 | 0 | 745 | 100 |
| Preferred Forb Availability | High Species Richness | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Riparian and/or Meadow Habitat Stability | PFC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Table 15** *(continued)*. Sage-Grouse Breeding Season (Summer) Habitat Indicators in Priority, General, and Other Habitat Management Areas (PHMA) in Nevada

| Late Brood-Rearing / Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OHMA | | | | | | | | | |
| Indicator Description | Desired Condition | Monitoring Locations Suitable | | Monitoring Locations Not Suitable | | Monitoring Locations Where Indicator Not Measured[1] | | Totals | |
| | | Count | Percentage | Count | Percentage | Count | Percentage | Count | Percentage |
| Sagebrush Cover | 10-25% | 166 | 36.9 | 284 | 63.1 | 0 | 0 | 450 | 100 |
| Perennial Grass and Forb cover | >15% | 155 | 34.3 | 295 | 65.6 | 0 | 00 | 450 | 100 |
| Deep-rooted Perennial Bunchgrass Height | 7 inches | 196 | 72.3 | 75 | 27.7 | 0 | 0 | 271 | 100 |
| Perennial Forb Cover | ≥5% arid ≥15% mesic | 21 | 4.7 | 429 | 95.3 | 0 | 0 | 450 | 100 |
| Preferred Forb Availability | High Species Richness | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Riparian and/or Meadow Habitat Stability | PFC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., riparian and/or meadow habitat stability measured because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance.

**Table 16.** Sage-Grouse Breeding Season (Winter) Habitat Indicators in Priority, General, and Other Habitat Management Areas (PHMA) in Nevada

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Suitable** | | **Monitoring Locations Not Suitable** | | **Monitoring Locations Where Indicator Not Measured[1]** | | **Totals** | |
| | | **Count** | **%** | **Count** | **%** | **Count** | **%** | **Count** | **%** |
| Sagebrush Cover | >10% | 1470 | 60.9 | 943 | 39.1 | 0 | 0 | 2413 | 100 |
| Sagebrush Height | 9.8 inches above snow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | >10% | 433 | 51.3 | 411 | 48.7 | 0 | 00 | 844 | 100 |
| Sagebrush Height | 9.8 inches above snow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **OHMA** | | | | | | | | | |
| Sagebrush Cover | >10 % | 260 | 51.6 | 244 | 48.4 | 0 | 0 | 504 | 100 |
| Sagebrush Height | 9.8 inches above snow | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1] Indicator not monitored on a plot may be due to protocol (e.g., no sagebrush height because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance (e.g., no sagebrush height because sagebrush was sparse enough that it was never encountered where heights were measured).

## 1.3. Habitat trigger summary

Through the summer of 2019 the Nevada Sagebrush Ecosystem Technical Team worked with members of a Statewide Technical Team to collect data necessary to assign triggers to Population Management Units (PMU) which had habitat warnings consistent with the **Nevada Greater Sage Grouse Conservation Plan** adaptive management process. The Statewide Technical Team is comprised of representatives from Bureau of Land Management (BLM), U.S. Forest Service, U.S. Fish and Wildlife Service, Nevada Department of Wildlife (NDOW), Nevada Association of Counties, University of Nevada – Reno, U.S. Geological Survey, and the Nevada Division of Forestry. This team assigned triggers on August 8, 2019. The local Adaptive Management Response Team (AMRT) regional meetings occurred throughout the winter of 2019-2020. These teams consisted of willing participants from all stakeholder groups in a defined area such as local conservation groups, grazing permittees, other affected land users, and federal/State agencies. This process is intended to determine the potential reasons for population and habitat declines. In the case of habitat triggers where the trigger is self-evident (fire or anthropogenic impact), determining any appropriate management response will be the main effort.

**Adaptive Management Strategy Overview**

This adaptive management strategy includes warnings, soft and hard triggers, and responses. Triggers are not specific to any particular agency effort but identify GRSG population and habitat thresholds outside of natural fluctuations or variations (with the exception of wildfires). Triggers are based on the two key metrics that are being monitored: population status and habitat loss. Adaptive management, responding to specific triggers, can provide added confidence that management actions are robust and able to respond to a variety of conditions and circumstances to enable conservation of GRSG habitat and populations. Reaching a trigger will initiate a local-state-federal interagency dialogue in collaboration with affected authorized land users (e.g., grazing permittee) to evaluate causal factor(s) and recommend adjustments to implementation-level activities to reverse the trend. The State of Nevada has been using a collaborative and consensus-based process with stakeholders, appropriate state and local agencies, and affected authorized land users when developing and implementing management responses when a trigger has been identified.

The scales used to analyze population triggers and apply management responses are at the individual lek, lek cluster, and BSU (figure 14). Adaptive management responses will only apply to habitat management areas (HMAs), which includes PHMA, GHMA, OHMA, within these scales. Habitat adaptive management warnings and triggers will be analyzed only at the lek cluster scale. The boundaries of the BSU and lek clusters may be adjusted over time, based on the understanding of local GRSG population interactions, genetic sampling, and climate variation. Population and habitat analyses used to identify warnings and triggers may be updated based on new science and advances in technology (e.g., integrated population models).

The hierarchy of GRSG population and habitat scales is as follows:

- Lek—Individual breeding display site where male and female GRSG congregate, with males performing courtship displays to gain mating opportunities with females.
- PMU (Lek cluster)—A group of leks in the same vicinity, among which GRSG may interchange over time and representing a group of closely related individuals.
- Biologically Significant Units (BSUs) —Represents nested lek clusters with similar climate and vegetation conditions.

Figure 14 below corresponds to lek clusters and BSUs that were defined by the USGS modeling analysis. They are different boundaries than the PMUs and BSUs that are defined by the State of

Nevada, by NDOW. While USGS identifies population triggers according to their lek cluster and BSU spatial boundaries, for the purposes of this adaptive management strategy the SETT will be using the NDOW PMU and BSU boundaries to identify causal factors and management responses. USGS population triggers reached, such as individual lek or lek cluster triggers, will be applied to and identified with the NDOW PMU and BSUs. Habitat triggers as identified by the Statewide Technical Team will be based on the PMU or BSU spatial scale (i.e., Tuscarora PMU reached a habitat trigger due to fire within a large portion of that PMU).

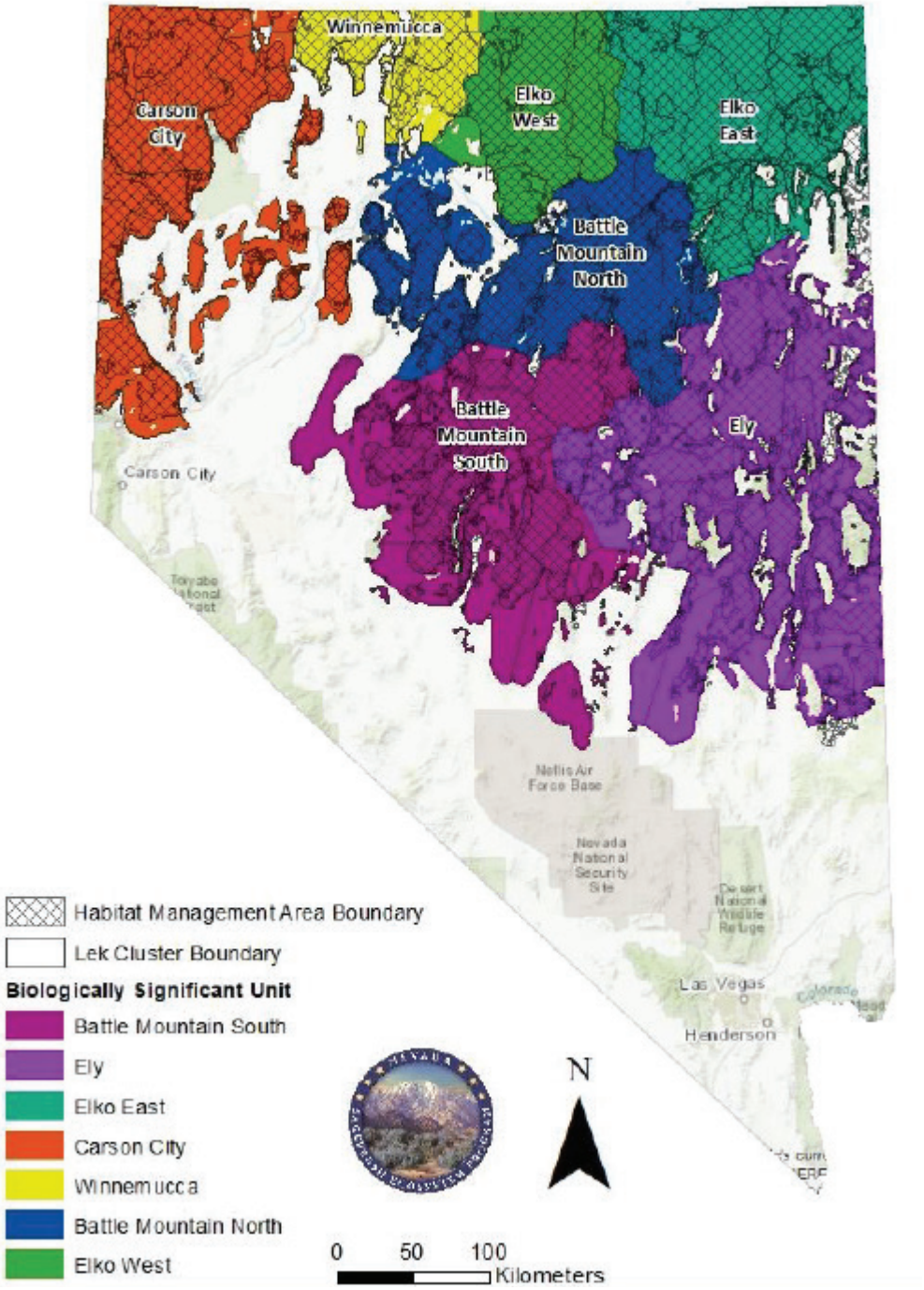



**Figure 14.** Adaptive management trigger analysis areas: USGS defined Biologically Significant Units and lek clusters (PMUs) for GRSG in Nevada.

### Habitat Triggers – Statewide Overview

The Statewide Technical Team created a list of habitat warnings (wildfires, new anthropogenic disturbance, other events causing sagebrush habitat loss) over a 3-year period. A process was developed to prioritize and rank warnings based on several data layers to inform importance of habitat that was impacted, which included proportion of leks affected, genetic connectivity, fire risk, resistance and resilience scores, and others. Professional opinion and judgement were used to help refine the initial rankings. Habitat triggers are only analyzed at the PMU and BSU scales, and seven PMUs were identified as having reached a habitat trigger.

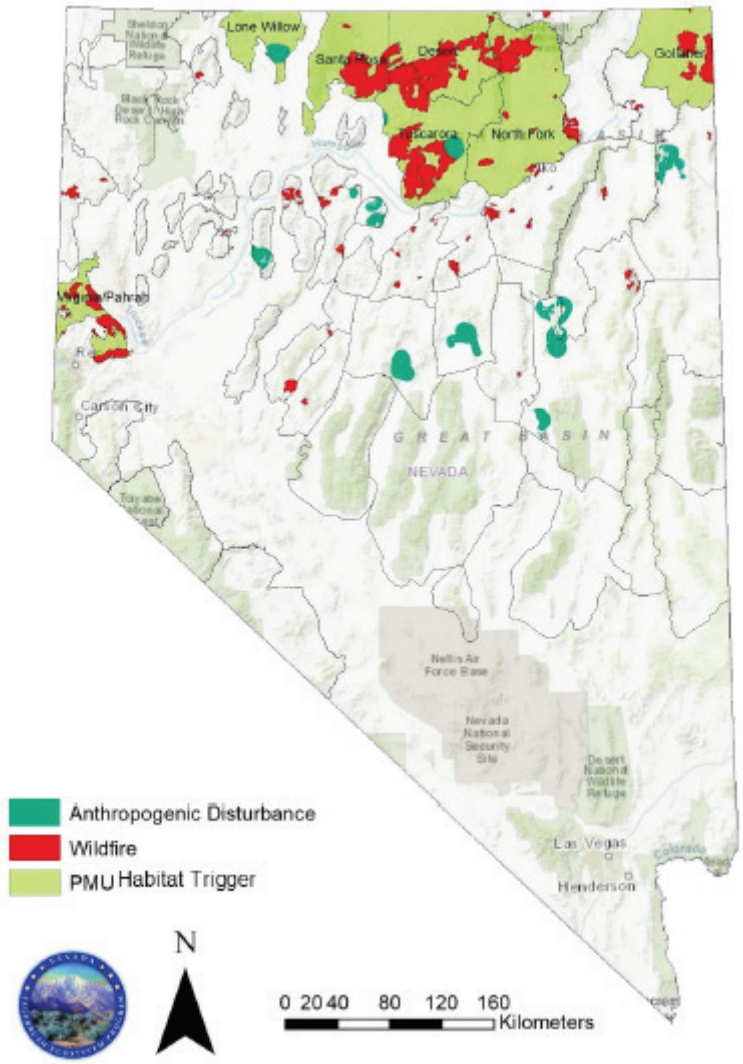



**Figure 15.** The seven PMUs that reached a habitat trigger. Habitat warnings that were identified and analyzed, including wildfire and new anthropogenic disturbance, are also mapped.

### Population and Habitat Triggers – Detail

In total, the Statewide Technical Team identified seven PMU habitat triggers, seven soft lek cluster PMU triggers, five hard lek triggers, and 12 soft lek triggers figure 15. The seven PMUs that reached a habitat trigger. Habitat warnings that were identified and analyzed, including wildfire and new anthropogenic disturbance, are also mapped.5). Population triggers affected 18 PMUs, and Habitat triggers affected seven PMUs, of which three contained both population and habitat triggers, resulting in a total of 22 PMUs having reached a trigger (table 17 and table 21).

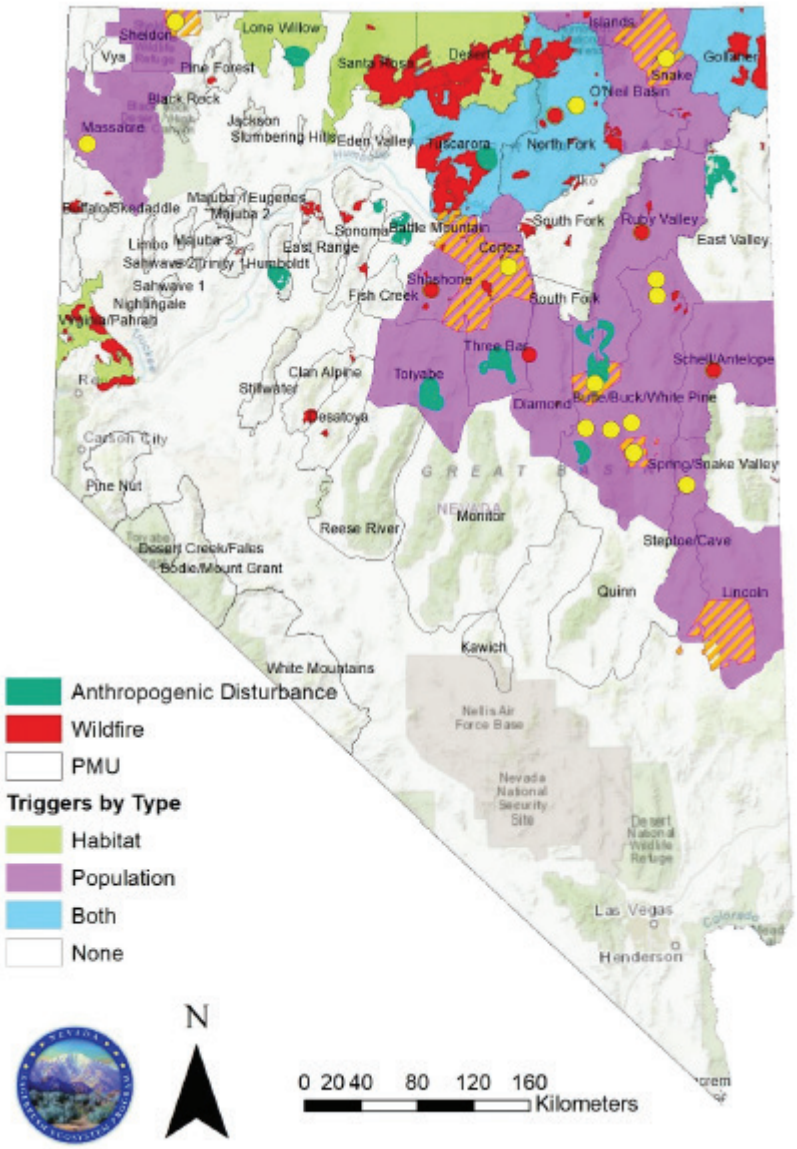



**Figure 16.** Final population and habitat triggers analyzed by the Statewide Technical Team.

The Local AMRTs were tasked to further define and prioritize habitat and population triggers identified by the Statewide Technical Team (figure 16). The AMRTs, based on local knowledge and resources, can recommend to remove or add triggers. If a trigger was suggested to be removed or added, justification is provided.

- **Conservation Planning Area**: One of the seven identified Conservation Planning Areas.
- **Trigger Type – Statewide**: The Habitat or Population trigger as identified by the Statewide Technical Team and USGS.
- **Spatial Scale**: Scale of the population or habitat trigger, can be 'lek', 'PMU,' or 'BSU.'
- **Trigger Name**: The name of the lek, fire, PMU, event, or other identifying description for the trigger.

**Table 17.** 2016 Habitat Triggers Identified by PMU

| Conservation Planning Area | Year | Trigger Type – Statewide | Causal Factor | PMUs Affected |
|---|---|---|---|---|
| **Elko Stewardship** | 2016 | Habitat (4 PMUs) | Wildlife | Gollaher, Tuscarora, Desert, North Fork |
| **North Central** | 2016 | Habitat | Wildlife and Anthropogenic Disturbance | Lone Willow |
| **North Central** | 2016 | Habitat | Wildfire | Santa Rosa |
| **South Central** | 2016 | Habitat<br>*AMRT recommends adding due to new information* | Anthropogenic Disturbance | Toiyabe |

## 2. Land Health Standards Evaluations

Between 2015 and 2020, the 2019 RIME report contained the only data available and then only for Category C Allotments. Table 18 shows the acres meeting the Fundamentals of Land Health from the 2019 RIME report.

### 2.1. Category A rangelands

- Category A Rangelands
  - Rangelands meeting all standards or making significant progress toward meeting the standard

**Table 18.** Category A Allotments - Nevada

| Year | Category | BLM Acres in Assessed Allotments |
|---|---|---|
| 2018 | Category A Rangelands | 7,487 |

### 2.2. Category B rangelands

- Category B Rangelands
  - Rangelands not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (current livestock grazing is a significant factor)

**Table 19.** Category B Allotments - Nevada

| Year | Category | BLM Acres in Assessed Allotments |
|---|---|---|
| 2015 | Category B Rangelands | 26,251 |
| 2018 | Category B Rangelands | 55,986 |

## 3. Surface Disturbance in PHMA and GHMA

The result of tracking the number of BLM authorizations and acres disturbed per LUP Decision or Program Area disturbance type in total since 2015 are displayed in the following table. Nevada State Office authorized 218 surface disturbing activities in PHMA and GHMA resulting in a total of approximately 26,142.9 acres of disturbance in compliance with the land use plan disturbance cap (table 20).

**Table 20.** Count of Authorizations in GRSG PHMA and GHMA from 2015–2019

| Decision/Program Area | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA | Count of Authorizations in GHMA | Total Acres of Authorizations in GHMA |
|---|---|---|---|---|
| Coal Leasing | 0 | 0 | 0 | 0 |
| Fluid Mineral Leasing (O&G) [1] | 14 | 32.6 | 8 | 12.66 |
| Geothermal Energy | 7 | 40.014 | 0 | 0 |
| Locatable Minerals [2] | 17 | 21,680 | 14 | 3845.69 |
| Nonenergy Leasable Minerals | 0 | 0 | 0 | 0 |
| Rights-of-Way [3] | 44 | 1.455 | 58 | 518.018 |
| Salable - Mineral Material Disposals | 21 | 0 | 21 | 12.4 |
| Solar Energy | 0 | 0 | 0 | 0 |
| Trails & Travel Management | 2 | 0 | 12 | 0 |
| Utility Corridors | 0 | 0 | 0 | 0 |
| Wind Energy | 0 | 0 | 0 | 0 |
| **Totals** | **105** | **~21,754.069** | **113** | **~4,388.83** |

[1] Fluid Mineral Leasing is not a surface disturbing activity until an APD has been approved by the BLM and an exception is granted for the NSO stipulation applied to PHMA.
[2] Authorizations were renewals of existing mineral material permits or authorizations for use in existing mineral material sites
[3] Authorizations were renewals of existing ROW permits, amendments of existing ROW permits, or transfers of ROW permits. Some amendments included additional surface disturbance within the existing ROW

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

The following is description of the Adaptive Management Strategy from the Nevada Conservation Credit System **Adaptive Management Annual Report - 2019**.

**Population Triggers – Statewide Overview**

The USGS analyzed population triggers at multiple spatial scales using a state-space, hierarchical modeling process (Coates et al. 2017). The analysis identifies soft and hard warnings and triggers based on population rates of change at the lek, lek cluster (PMU), and BSU levels. The rate at which a population trend declines and decouples from the trend at the associated higher-order scale will dictate whether or not a soft or hard trigger is reached. Thresholds for stability and decoupling for soft and hard triggers were determined from simulation analyses that used 17 years of lek data (2000-2016). In this analysis, USGS identified 12 soft lek triggers, five hard lek triggers, and seven soft lek cluster (PMU) triggers (figure 17).

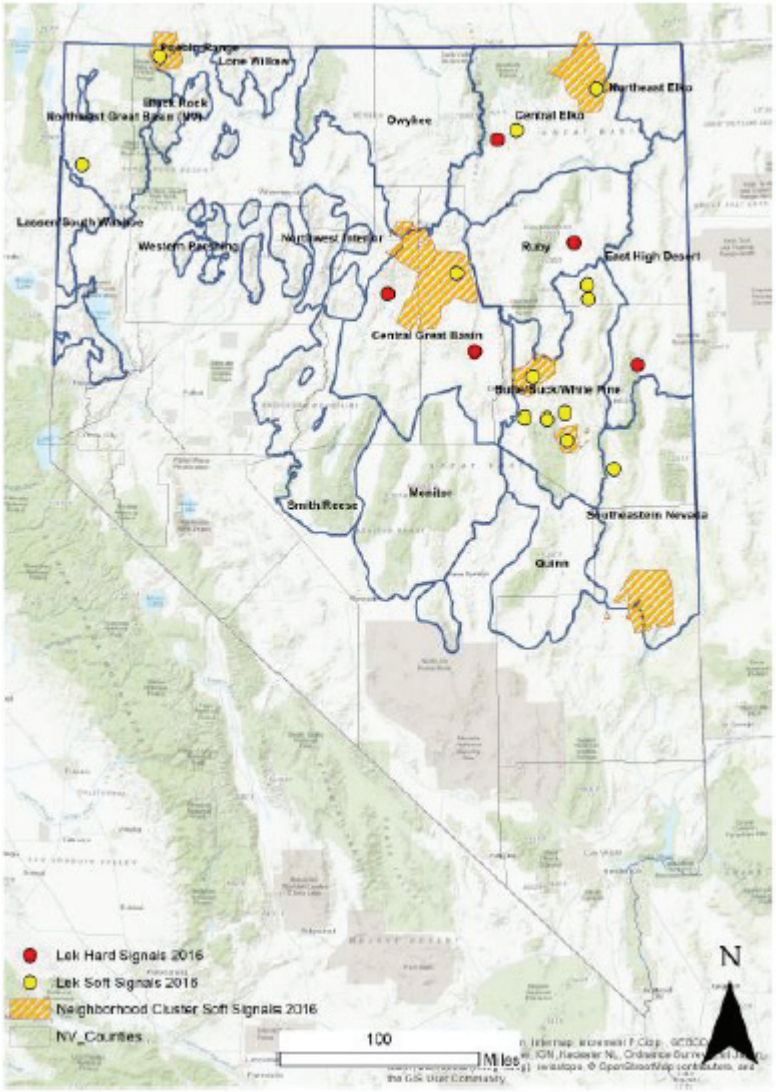



**Figure 17.** USGS lek and lek cluster (PMU) triggers reached in 2017.

## 4.1. Population trigger summary by year

**Table 21.** 2016 Population Triggers Identified by PMU

| Conservation Planning Area | Year | Trigger Type – Statewide | PMUs Affected | Causal Factors |
|---|---|---|---|---|
| Elko Stewardship | 2016 | Population – Hard Lek | Ruby Valley | Analysis in progress |
| Elko Stewardship | 2016 | Population – Hard Lek | North Fork | Analysis in progress |
| Elko Stewardship | 2016 | Population – Soft Lek | North Fork | Analysis in progress |
| Elko Stewardship | 2016 | Population – Soft Lek<br>AMRT recommends removing due to GRSG travel between leks in close proximity | Snake | Analysis in progress |
| Elko Stewardship | 2016 | Population – Soft Lek | Butte/Buck/White Pine | Analysis in progress |
| Elko Stewardship | 2016 | Population – Soft Cluster (2)<br>AMRT recommends the lek cluster trigger be removed for Islands and Gollaher due to a very small area affected in those PMUs. | Tuscarora, O'Neil Basin, Islands, Snake, Gollaher | Analysis in progress |
| Lincoln | 2016 | Population – Soft Cluster | Lincoln, Steptoe/Cave | Analysis in progress |
| South Central | 2016 | Population – Hard Lek | Shoshone | Analysis in progress |
| South Central | 2016 | Population – Hard Lek | Diamond | Analysis in progress |
| South Central | 2016 | Population – Soft Lek | Cortez | Analysis in progress |
| South Central | 2016 | Population – Soft Cluster (2) | Shoshone, Cortez, Tuscarora, Three Bar, Toiyabe | Analysis in progress |
| Washoe/Modoc/Lassen (managed by BLM California) | 2016 | Population – Soft Lek | Massacre | Analysis in progress |
| Washoe/Modoc/Lassen (managed by BLM California) | 2016 | Population – Soft Lek | Sheldon | Analysis in progress |
| Washoe/Modoc/Lassen (managed by BLM California) | 2016 | Population – Soft Cluster | Sheldon | Analysis in progress |
| White Pine | 2016 | Population – Soft Lek | Butte/Buck/White Pine | Analysis in progress |
| White Pine | 2016 | Population – Soft Lek | Steptoe/Cave | Analysis in progress |
| White Pine | 2016 | Population – Hard Lek<br>AMRT (NDOW) recommends removing due to database error | Schell/ Antelope | Analysis in progress |
| White Pine | 2016 | Population – Soft Cluster (2) | Butte/Buck/White Pine, Ruby Valley, Diamond | Analysis in progress |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data as described above. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the land use plan Habitat Objectives Table by seasonal habitat. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM nor are they achievable on every acre (e.g., due to ecological site potential) of designated sage-grouse Habitat Management Areas across the landscape that BLM manages. The indicators do, however, provide a suite of habitat characteristics that helps inform BLM when developing and implementing management decisions and projects within sage-grouse habitat.

   For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. BLM policy directs the field to use the data collected for these habitat indicators as a whole when assessing suitability of sage-grouse habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) are then used during land health evaluations and NEPA analyses in authorization processes.

   The Habitat Objectives Table in the SG land use plan describes overall desired conditions through a set of indicators and associated benchmarks for sage-grouse seasonal habitats within the planning area. The Habitat Objectives Table states that any one single habitat indicator does not define whether the habitat objective is or is not met. Instead, the preponderance of evidence from all indicators within that seasonal habitat period must be considered when assessing sage-grouse habitat objectives. These habitat objectives are not obtainable on every acre within the designated GRSG habitat management areas. Therefore, the determination on whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in the table.

***Nesting and Early Brood-Rearing Seasonal Habitat***

Nesting/early brood-rearing seasonal habitat includes five quantitative indicators: sagebrush cover, perennial grass cover, annual grass cover, total shrub cover, perennial grass (and forb) height, and proximity of tall structures. Within PHMA, GHMA, and OHMA, sagebrush cover is not within the desired range of ≥20% on a majority of the sites. In PHMA, 72.2% of the monitoring locations were not meeting the benchmark. Similarly, sagebrush cover was not meeting the benchmark in GHMA (78%) and OHMA (83.2%) locations. Total shrub cover only met the desired conditions 19.4% (PHMA), 17.2% (GHMA), and 13.7% (OHMA) of the time. Although total shrub cover and sagebrush cover is not within the desired condition, this does not necessarily mean these locations are unsuitable. These monitoring locations could have either low ecological site potential for sagebrush cover/total shrub cover, or the measured sagebrush cover/total shrub cover values could be slightly above or below the desired condition. These aspects will be further analyzed within a final HAF report.

For PHMA, GHMA, and OHMA the annual grass cover for nesting and brood-rearing habitat are meeting the desired conditions in more than half the locations. Annual grass cover is meeting at ≥10% of the total locations monitored within PHMA (51.9%) and GHMA (54%). OHMA is meeting at ≥10% of the total locations at only 41.6% of the locations. Perennial grass cover (≥10%) within PHMA is within the desired condition on 63.8% of monitoring locations. However, in GHMA and OHMA, Perennial grass cover results were within the desired conditions only 48.5% (GHMA) and 42.2% (OHMA) of the time. Perennial grass and forb height (provide overhead and lateral concealment from predators) did not meet the desired condition in PHMA, GHMA, or OHMA in any suitable monitoring locations. Perennial forb cover is highly variable between years because it is dependent on the timing of spring temperatures and associated temperatures. The high variability that is outside management control makes it a difficult indicator to meet depending on annual variability.

***Late Brood-Rearing and Summer Seasonal Habitat***

Late brood-rearing/summer seasonal habitat contains six quantitative indicators: sagebrush cover, perennial grass and forb cover, deep-rooted perennial bunchgrass height, perennial forb cover, preferred forb cover, and riparian and/or meadow habitat stability. Like with nesting/early brood-rearing habitat, sagebrush cover and perennial forb cover indicators are not being met. Sagebrush cover is within the desired range on 37.8% of plots within PHMA, 36.4% of plots within GHMA, and 36.9% of plots within OHMA. Perennial forb cover is within the desired range on 5.7% of the locations in PHMA, 2.6% of the locations in GHMA, and 4.7% of the locations in OHMA. However, deep-rooted perennial bunchgrass height does meet the desired conditions at locations in PHMA (84.5%), GHMA (75.4%), and OHMA (72.3%). Perennial grass and forb cover is within the desired range at 61.5% (PHMA) of the suitable monitoring locations, but only at 39.9% (GHMA) and 34.3% (OHMA) of the monitoring locations. Preferred forb availability and riparian and/or meadow habitat stability were not measured at any locations in any of the three habitat types.

***Winter Seasonal Habitat***

Winter seasonal habitat includes two quantitative indicators: sagebrush cover and sagebrush height above snow. Sagebrush cover is being met on 60.9%, 51.3%, and 51.6% respectfully for PHMA, GHMA, and OHMA. Sagebrush height above snow was not measured in any habitat.

The LUP included the following objectives for seasonal habitat meeting the desired conditions:

- In all SFA and PHMAs, the desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush cover or as consistent with specific ecological site conditions. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6).
- Manage PHMAs and GHMAs for vegetation composition and structure, consistent with ecological site potential and to achieve GRSG habitat objectives.
- On public lands, establish, maintain, and enhance a resistant and resilient sagebrush vegetative community and restore sagebrush vegetation communities to reduce GRSG habitat fragmentation and maintain or reestablish GRSG habitat connectivity over the long term (Chambers et al. 2014).

The 2015 Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment included objectives for the amount of area that would meet the broad vegetative conditions for each of the seasonal use areas. The habitat conditions are not obtainable on every acre within the designated GRSG habitat management areas. The determination on whether the objectives have been met are based on the specific site's ecological ability to meet the desired condition. The summary of data included in the report is a plot summary and does not include an estimate of the amount of seasonal habitat that meets the objectives. This can be done when the data is evaluated with an interdisciplinary team following the process outlined in the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance. Site scale assessments evaluate the indicators collectively to determine suitability of seasonal habitat condition across biologically appropriate areas, where possible.

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/ or are not a manageable component of the plant community. In some cases, past management history, drought, etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within seasonal habitats or habitat management areas (HMA) may fall on these inclusions of nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results from the data for each habitat objectives do not represent the landscape as a whole. Rather, the results are solely based on the percentage of monitoring plots across the seasonal habitats/HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential.

Interpretation of the data is beyond the scope of this monitoring summary report. A mosaic of vegetation communities and ecological sites occurs across the range of sage-grouse and spatial data used to delineate habitats (seasonal and/or HMAs) to cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

Of the 568 allotments administered by Nevada that contain sage-grouse habitat, 89,724 BLM acres are meeting, or making progress towards meeting, the land health standards and 649,625 BLM acres are not meeting, grazing was the casual factor and management has changed. This data only partially answers the question by describing the final evaluation of the land health standards and does not specifically address the results of the sensitive species standard. Furthermore, rangelands not meeting standards or making significant progress toward meeting the standards, where no appropriate action has been taken to ensure significant progress toward meeting the standards (Category C), rangelands not meeting all standards

or making significant progress toward meeting the standards due to causes other than livestock grazing (Category D), or public land unevaluated have not been reported here. The BLM Nevada is currently in the process of addressing LHS for GRSG using HAF for allotments with GRSG habitat. Once these HAF assessments are completed they will help inform LHS, including the special status species habitat standard.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   The monitoring and disturbance data presented in the results section of this report indicates that the amount of disturbance within the planning area has remained under the disturbance caps at the project level and BSU scales as described in the land use plan. The information from the Form for Proposed Activities in Greater Sage-Grouse (GRSG) Habitat Management Areas submitted to NVSO displayed in this report (table 20) indicates that approximately 26,142.90 acres of new surface ground disturbance has been authorized in Nevada since 2015 Sage-Grouse ARMPA was signed. This amount of disturbance within the planning area remains under the 3% cap set forth in the land use plan.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The data presented in the results section indicate that since 2015, seven PMU habitat triggers, seven soft lek cluster PMU triggers, five hard lek triggers, and 12 soft lek triggers. Population triggers affected 18 PMUs, and habitat triggers affected seven PMUs, of which three contained both population and habitat triggers, resulting in a total of 22 PMUs having reached a trigger were tripped since the plans were signed in 2015 indicating population declines. However, just because the other 30 PMUs have not tripped a trigger does not necessarily mean their population is increasing or even stable, they could still be exhibiting declines. The BLM and Nevada Department of Wildlife currently do not have USGS information on other leks or PMUs that did not trip a trigger. The purpose of the USGS report was to only identify leks or clusters that have reached that trigger point. Table 22 and figure 18 do indicate a declining lek population. (Nevada Department of Wildlife. Nevada Sage-Grouse Conservation Project, Final Performance Report FBMS Grant No. F17AF00342, September 2019)

**Table 22.** Nevada Lek Count Summary from 2000-2019

| Year | Number of Males | Lek Surveyed | Active Leks | Average/active lek |
|---|---|---|---|---|
| **2000** | 4,601 | 358 | 233 | 19.7 |
| **2001** | 4,632 | 437 | 260 | 17.8 |
| **2002** | 5,093 | 652 | 321 | 15.9 |
| **2003** | 5,010 | 402 | 271 | 18.5 |
| **2004** | 7,472 | 505 | 321 | 23.3 |
| **2005** | 10,144 | 760 | 389 | 26.1 |
| **2006** | 11,229 | 737 | 433 | 25.9 |
| **2007** | 11,317 | 947 | 525 | 21.6 |
| **2008** | 7,550 | 786 | 438 | 17.2 |
| **2009** | 7,398 | 860 | 442 | 16.7 |
| **2010** | 7,402 | 752 | 411 | 18.0 |
| **2011** | 8,571 | 810 | 438 | 19.6 |
| **2012** | 9,953 | 935 | 523 | 19.0 |
| **2013** | 7,394 | 820 | 454 | 16.3 |
| **2014** | 9,063 | 934 | 512 | 17.7 |
| **2015** | 12,551 | 1,003 | 606 | 20.7 |
| **2016** | 13,366 | 1,048 | 586 | 22.8 |
| **2017** | 11,027 | 954 | 552 | 20.0 |
| **2018** | 9,184 | 971 | 551 | 16.7 |
| **2019** | 7,098 | 849 | 460 | 15.4 |
| **2000–2018 Average** | **8,577** | **772** | **435** | **19.7** |

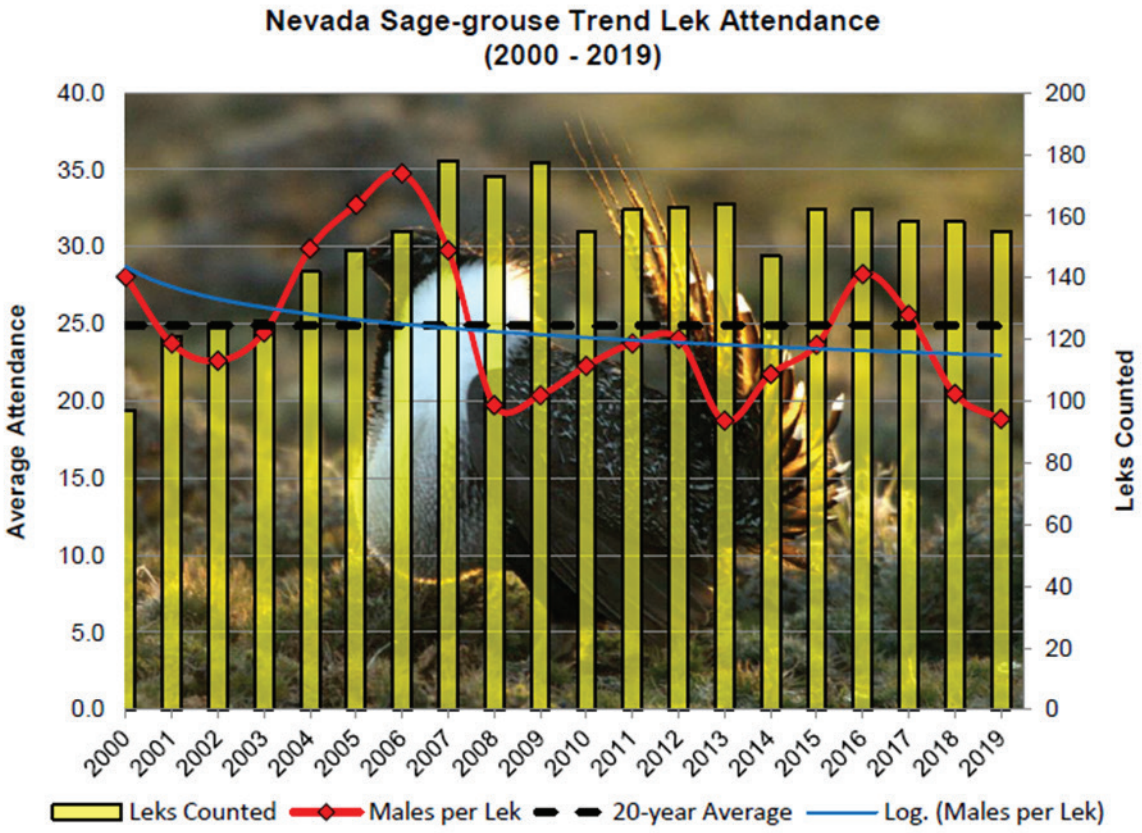



**Figure 18.** Nevada trend lek attendance from 2000-2019.

In conclusion, this BLM Nevada GRSG 5 Year Monitoring Report provides results of implementation monitoring of the 2015 land use plan decisions rather than assessing effectiveness of the conservation measures in the plan. This summary of the monitoring data should be considered a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

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Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 12: Oregon/Washington State Office Monitoring Report for the 2015 Oregon Land Use Plan Amendment

2015–2020

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# Appendix 12: Oregon/Washington State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 12: Oregon/Washington State Office Monitoring Report for the 2015 Oregon Land Use Plan Amendment

## 2015–2020


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# Introduction

This appendix to the Bureau of Land Management (BLM) Greater Sage-Grouse Plan Implementation Rangewide Monitoring Report (Rangewide GRSG Monitoring Report) describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures on BLM-administered lands outlined in the 2015 Oregon GRSG Approved Resource Management Plan Amendment (ARMPA). The Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 planning-wide monitoring efforts using datasets and methods identified in the Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions.

The structure for the Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on answering nine monitoring questions, including five questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy and four questions about the conservation measures contained in the individual 2015 BLM GRSG land use plan (LUP) amendments and revisions. This appendix answers the following four questions:

1. Are the plans meeting the sage-grouse habitat objectives?
2. Are sage-grouse Habitat Management Areas (HMAs) within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

The BLM Oregon monitored four factors (one factor per monitoring question) in designated sage-grouse HMAs (i.e., Priority Habitat Management Areas and General Habitat Management Areas, or PHMA and GHMA) within the 8 amendments planning area in Oregon:

- Habitat conditions, statewide and as articulated in the Seasonal Habitat Objectives Table (ARMPA table 2-2) and Adaptive Management Habitat Triggers
- Land Health Standards evaluations
- Surface disturbance in PHMA
- Sage-grouse population trends (in coordination with the state wildlife agency)

The BLM Oregon used the following methods for the four factors.

## 1. Habitat Conditions, Statewide and as Articulated in the Seasonal Habitat Objectives Table and Adaptive Management Habitat Triggers

### 1.1. Statewide habitat conditions

Summaries of 11 indicators of importance to sage-grouse rangewide were generated within sage-grouse habitat (type I) and outside of sage-grouse habitat (type II) mapped on BLM lands in Oregon in 2011. These indicators are important components of sage-grouse habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species) and provide opportunity to examine the effectiveness of the sage-grouse objectives in the ARMPA. These indicators provide consistent contextual information

about habitat conditions broadly within the state and are presented in all appendices to the Rangewide GRSG Monitoring Report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of the terrestrial Assessment, Inventory, and Monitoring Strategy (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 – **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Seasonal habitat conditions

Summaries of LMF and field-office collected AIM data were generated to evaluate how frequently quantitative habitat objectives in the Oregon ARMPA table 2-2 were met within seasonal habitats on BLM-administered lands. Seasonal habitats include breeding (pre-nesting, nesting, and early brood-rearing), summer (late-brood rearing, summering, and early autumn), and winter (late-autumn and winter). Seasonal habitats were mapped in cooperation with the Oregon Department of Fish and Wildlife (ODFW) based largely on sage-grouse lek locations and telemetry points, as well as vegetation, elevation, terrain roughness and other spatial data. At the time of this report, most seasonal habitat in Oregon had been mapped. Where maps were incomplete, the sampling date was used to group plots. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. Plots in nonhabitat (i.e., sites classified barren, western juniper, grass, forest, salt desert, etc.) were excluded from the analysis. Plot counts include plots where the sagebrush height and perennial grass-forb height objective were not measured because the indicator was not present. Plots are not weighted to represent to the overall area sampled, unlike the state-wide indicator summaries.

## 1.3. Adaptive management habitat triggers

The Adaptive Management Strategy outlined in appendix J of the ARMPA identifies hard and soft triggers for habitat and populations within Oregon Priority Areas for Conservation (PAC). Oregon's 20 PACs mirror ODFW Core Area Habitat and encompass all PHMA. Soft triggers represent an intermediate threshold indicating that management changes may be needed at the implementation level to reduce the likelihood of tripping a hard trigger. Hard triggers represent a threshold indicating that immediate and more restrictive plan-level action is needed to address sage-grouse conservation objectives.

Habitat triggers are calculated from the proportion of capable habitat acres within a PAC that are in existing (current) habitat. Capable habitat includes areas that either currently support vegetation cover appropriate for sage-grouse use (i.e., ≥5 percent cover of sagebrush species and <5 percent tree cover) or are predicted to support these vegetation conditions with treatments and/or natural plant succession. The BLM used two datasets from the **Integrated Landscape Assessment Project** developed by the Institute for Natural Resources to identify capable habitat and current habitat. Current habitat that has burned with high or moderate soil burn severity, based on Burned Area Reflectance Classification (BARC) maps, is considered habitat loss. The footprint of vegetation treatments (e.g., juniper removal, sagebrush planting) in capable sage-grouse habitat are only added to the current habitat acres when the BLM field office where the treatment was completed has verified the treated area supports ≥5 percent cover of sagebrush species and <5 percent tree cover.

Note that these methods apply to the Oregon BLM planning area whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the Biologically Significant Unit (BSU) scale. In Oregon, BSU is equivalent to PAC.

## 2. Land Health Standards (LHS) Evaluations

Summarized data for allotments that contain sage-grouse habitat in the planning area was used to address this factor. The BLM Oregon State Office tracked completion of LHS thru the annual Rangeland Inventory, Monitoring, and Evaluation (RIME) Report, Rangeland Administration System (RAS), and thru causal factor analyses of PACs that had tripped an adaptive management trigger, as described in appendix J of the ARMPA. The state office tracked whether the sage-grouse portion of standard 5 (Native, T&E, and Locally Important Species) was met or making significant progress towards meeting with a data call to the districts. A spreadsheet from the RAS query was created to identify the grazing permits/leases fully processed from 2015 to 2019. Districts completed the table and provided rationale on whether standard 5 was met or not met related to sage-grouse.

The LHS data from 2015 to 2019 is presented in two categories:

- BLM acres of Category A allotments that contain SG habitat – All LHS are achieved or significant progress toward achieving is being made.
- BLM acres of Category B allotments that contain SG habitat – Not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress towards achieving LHS.

## 3. Surface Disturbance in PHMA

The BLM Oregon State Office initiated a plan conformance review process in 2016 to track BLM-authorized surface disturbing actions in PHMA and to facilitate consistent interpretations of the sage-grouse plan amendments across administrative boundaries. In this process, a project lead completes a worksheet (i.e., Plan Conformance Request and Review Template) for each proposed lands and realty, mining, and right-of-way project, including all projects subject to the surface disturbance criteria identified in IM OR-2016-021 and IM OR-2018-015. Percent disturbance within a project area is calculated using the Surface Disturbance and Restoration Tracking Tool (SDARTT). Following BLM state office review of the worksheet, the authorizing official will sign the template, marking the completion of the plan conformance review process. These methods apply at the project scale. In addition, the BLM National Operations Center tracks the amount of anthropogenic disturbance at the Oregon PAC scale using datasets described in the GRSG Monitoring Framework.

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

The Adaptive Management Strategy (ARMPA appendix J) outlines the process the BLM, ODFW and the U.S. Fish and Wildlife Service (USFWS) used to set a population threshold (i.e., trigger) for each Oregon PAC. The BLM based the population triggers on both interannual rate of change (lambda) and a 5-year running mean in the estimated maximum number of males counted at leks since about 1994. Lek counts are an index of population size, and the actual number of sage-grouse in each PAC is unknown. PACs that did not have enough data in 2015 to establish population triggers have a hard trigger (no soft trigger) based on the number of leks counted and annual population trend.

Annually, the BLM, in conjunction with ODFW and USFWS determines whether the 5-year running annual mean population estimate and lambda have exceeded (i.e., tripped) a soft or hard population trigger. The BLM Oregon State Office directs the district offices to review all pending authorizations within PACs that have tripped a trigger to determine if these actions would exacerbate the trigger (i.e., continue the population

and/or habitat decline) or would otherwise be inconsistent with the trigger responses set forth in the ARMPA. Following this early alert, the state office issues an Information Bulletin (IB) formally announcing where triggers have been exceeded, which triggers have been exceeded, the required responses where a hard trigger has been exceeded, and a brief summary of the causal factor analysis process and outcomes.

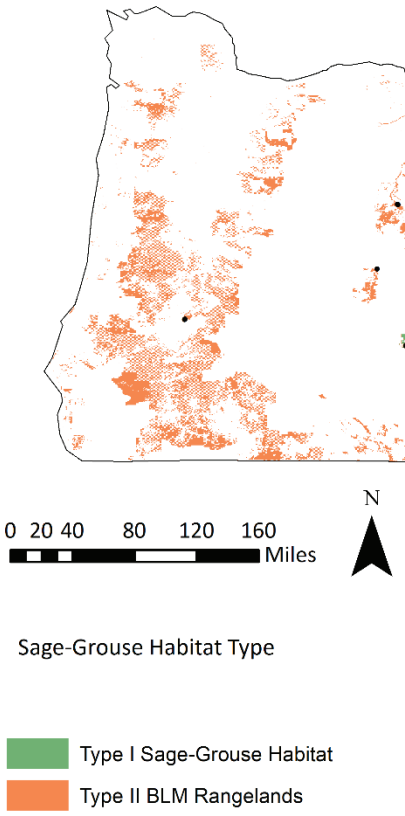
# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance, and sage-grouse population trends.

## 1. Habitat Conditions

### 1.1. Statewide habitat conditions

Intensification of LMF samples within Oregon is evident from the larger number of plots measured in type I (1,432) sage-grouse habitat than in type II (133) rangelands (figure 1). Weighted annual average estimates of key habitat components measured during 2013-2018 were used to characterize average habitat conditions and trends statewide.




| Year | Type | State | BLM_Sample | BLM_Acres |
|---|---|---|---|---|
| 2013 | 1 | OR | 315 | 8,730,379 |
| 2013 | 2 | OR | 28 | 4,199,002 |
| 2014 | 1 | OR | 263 | 8,907,938 |
| 2014 | 2 | OR | 26 | 4,761,702 |
| 2015 | 1 | OR | 246 | 9,041,098 |
| 2015 | 2 | OR | 25 | 3,904,212 |
| 2016 | 1 | OR | 272 | 9,128,737 |
| 2016 | 2 | OR | 30 | 4,522,979 |
| 2017 | 1 | OR | 169 | 9,042,179 |
| 2017 | 2 | OR | 15 | 3,624,993 |
| 2018 | 1 | OR | 167 | 9,089,672 |
| 2018 | 2 | OR | 9 | 3,611,255 |

**Figure 1.** Landscape Monitoring Framework plot locations 2013-2018 used to derive Oregon state-wide estimates.

Average percent sagebrush cover has remained stable since 2013 (figure 2), although it is at the lower end of what is considered suitable cover for sage-grouse (10-25%). Sagebrush height is relatively static (figure 3). More than 75% of sagebrush plants are spreading in shape (figure 5), which generally provides better nesting cover than columnar sagebrush (figure 4). Mean herbaceous plant species height in sage-grouse habitat (type I) shows little variation between years (figure 6). Percent cover of perennial grasses and forbs has increased in sage-grouse habitat since 2013 (figure 7). Average percent bare ground shows a slight decline since 2013, (figure 8). Invasive annual grasses appear to be increasing within sage-grouse habitat (figure 9). As expected from inter-annual variation in precipitation, the proportion of BLM-administered acres with nonnative invasive plant species fluctuated annually; however, the trend has been static (figures 10 and 11).

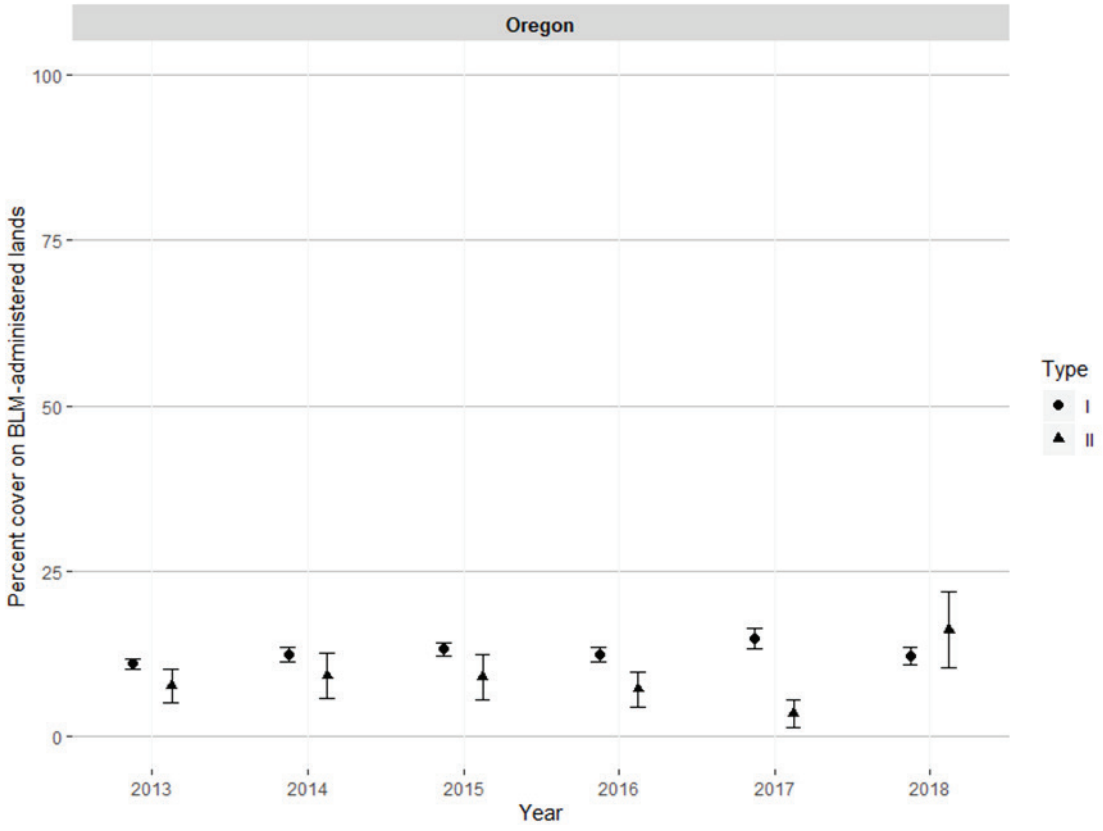



**Figure 2.** Mean percent cover of sagebrush on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) in Oregon.

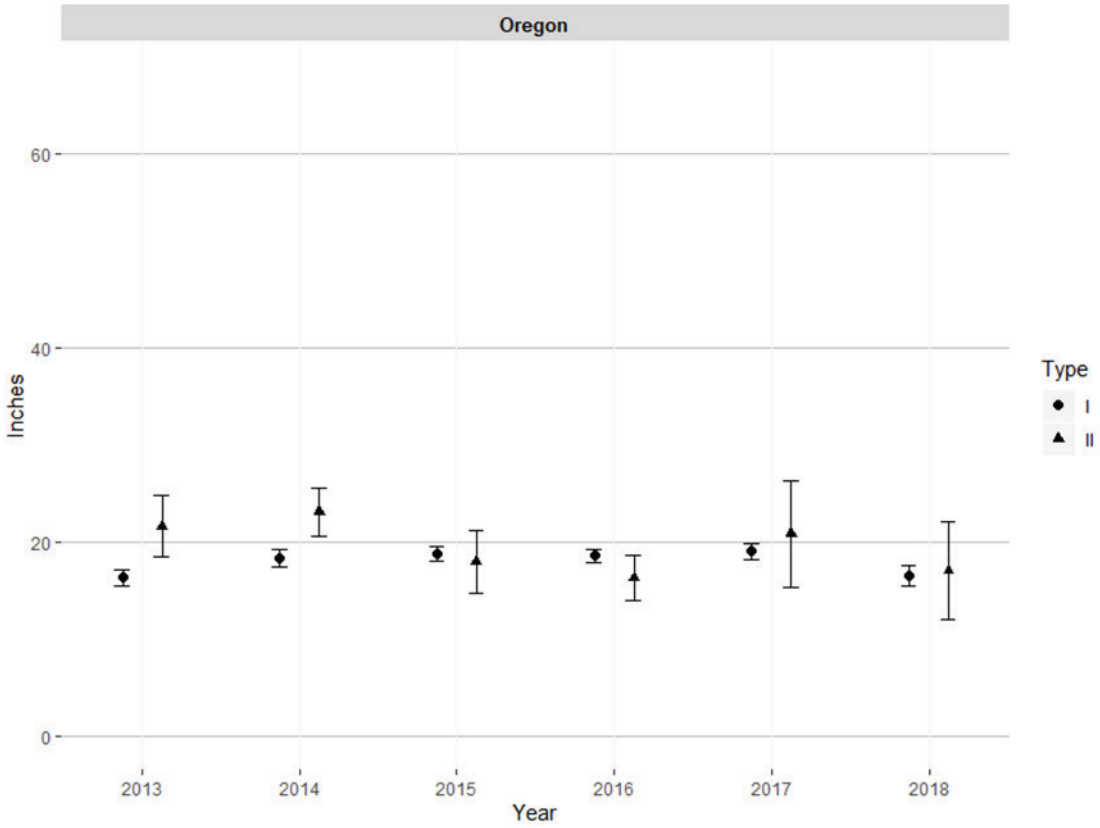



**Figure 3.** Mean sagebrush species height in inches on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) in Oregon.

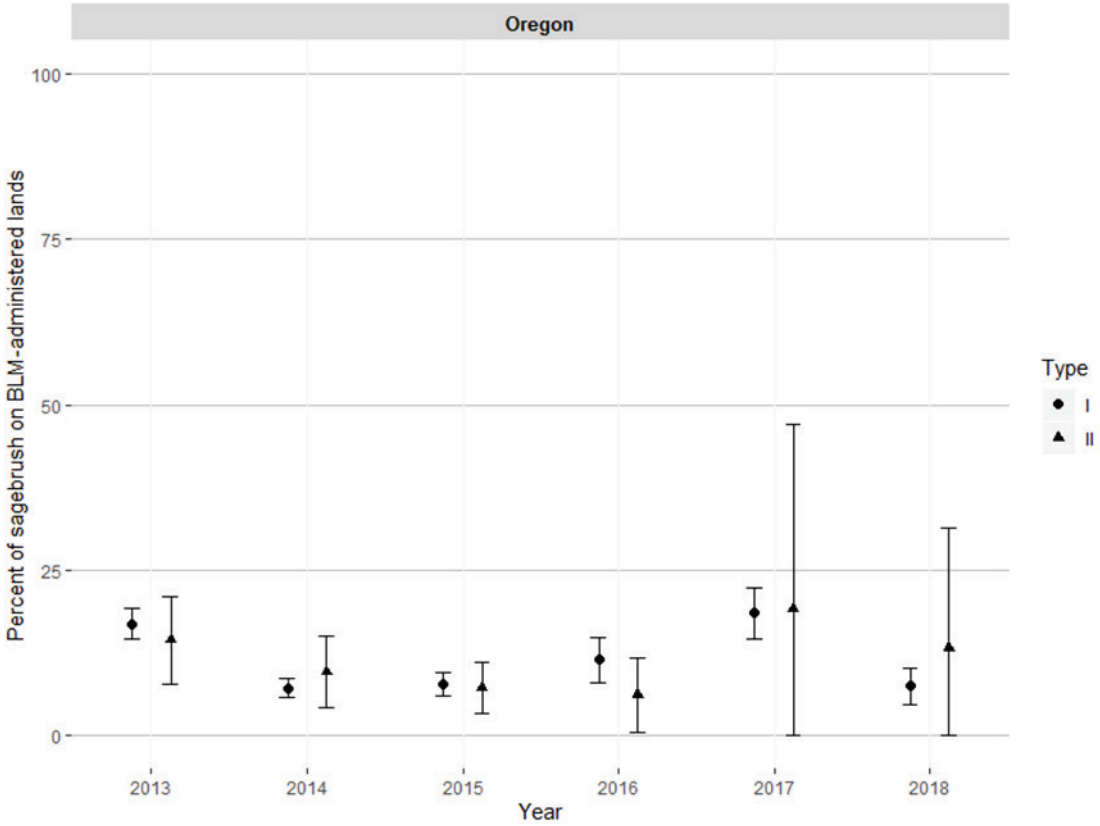



**Figure 4.** Proportion of sagebrush that is columnar shaped on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) in Oregon.

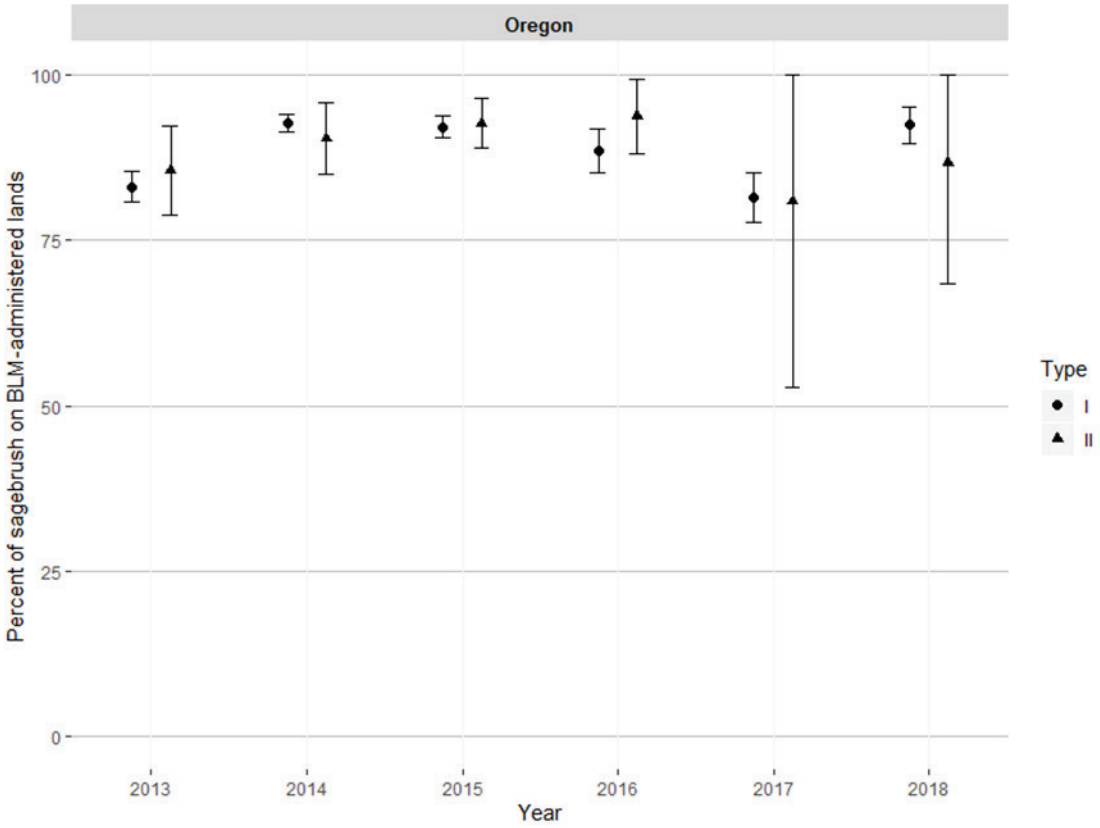



**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) in Oregon.

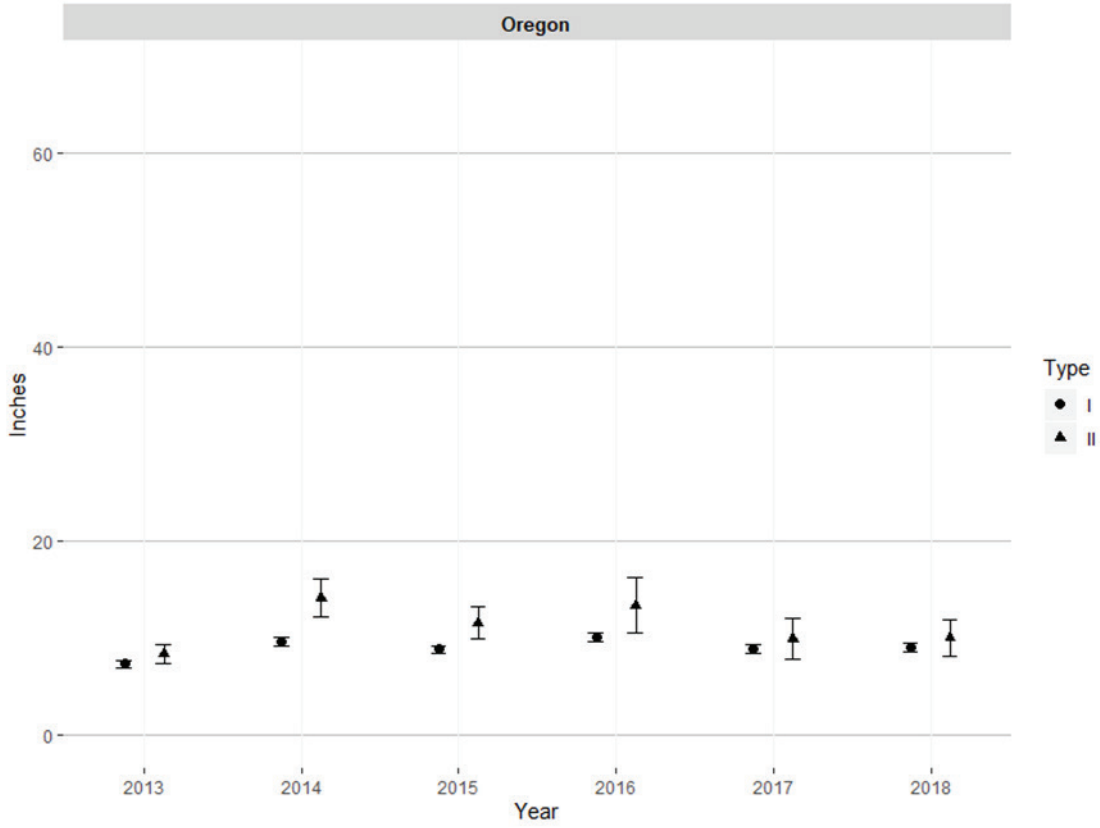



**Figure 6.** Mean herbaceous plant species height in inches on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) in Oregon.

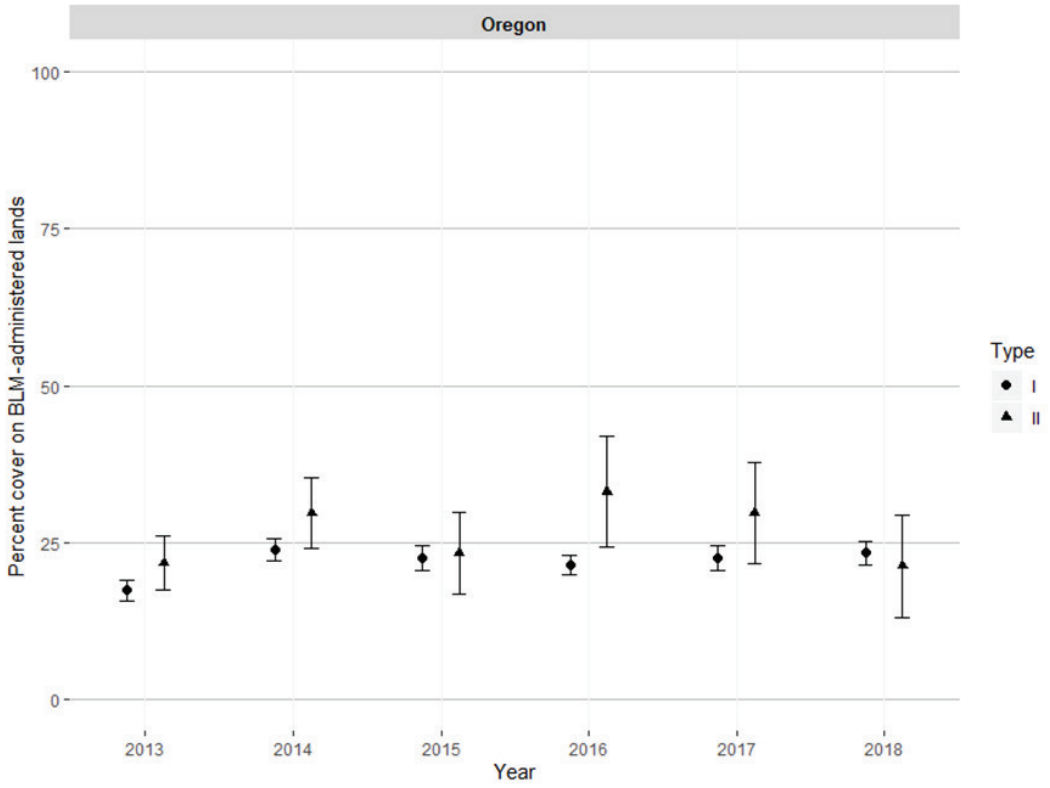



**Figure 7.** Mean percent cover of perennial grasses and perennial forbs on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) in Oregon.

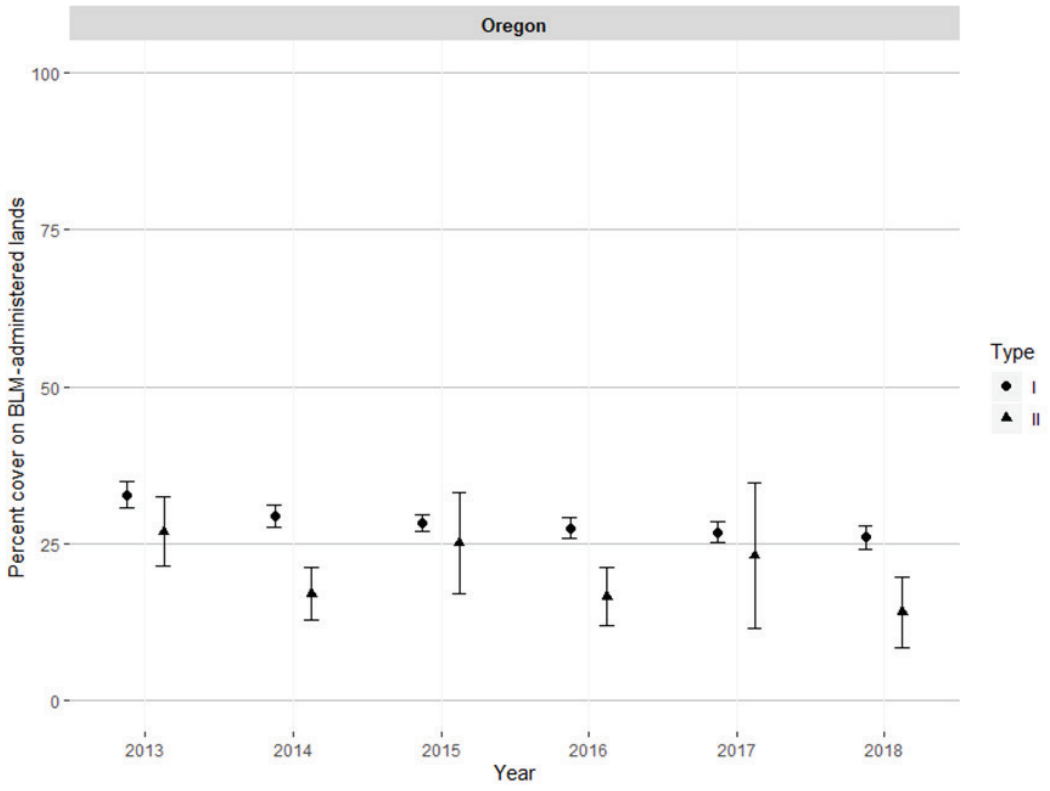



**Figure 8.** Mean percent cover of bare ground on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and other BLM rangelands (type II) in Oregon.

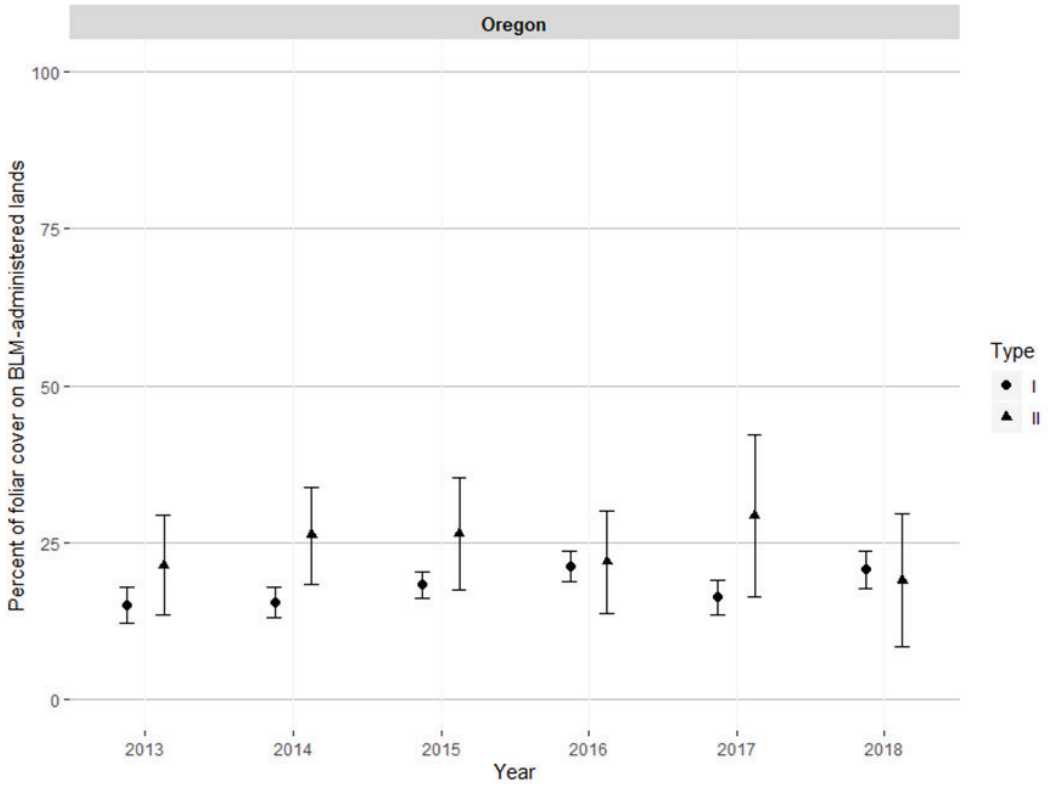



**Figure 9.** Proportion of vegetation composed of annual grasses on BLM rangelands (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) in Oregon.

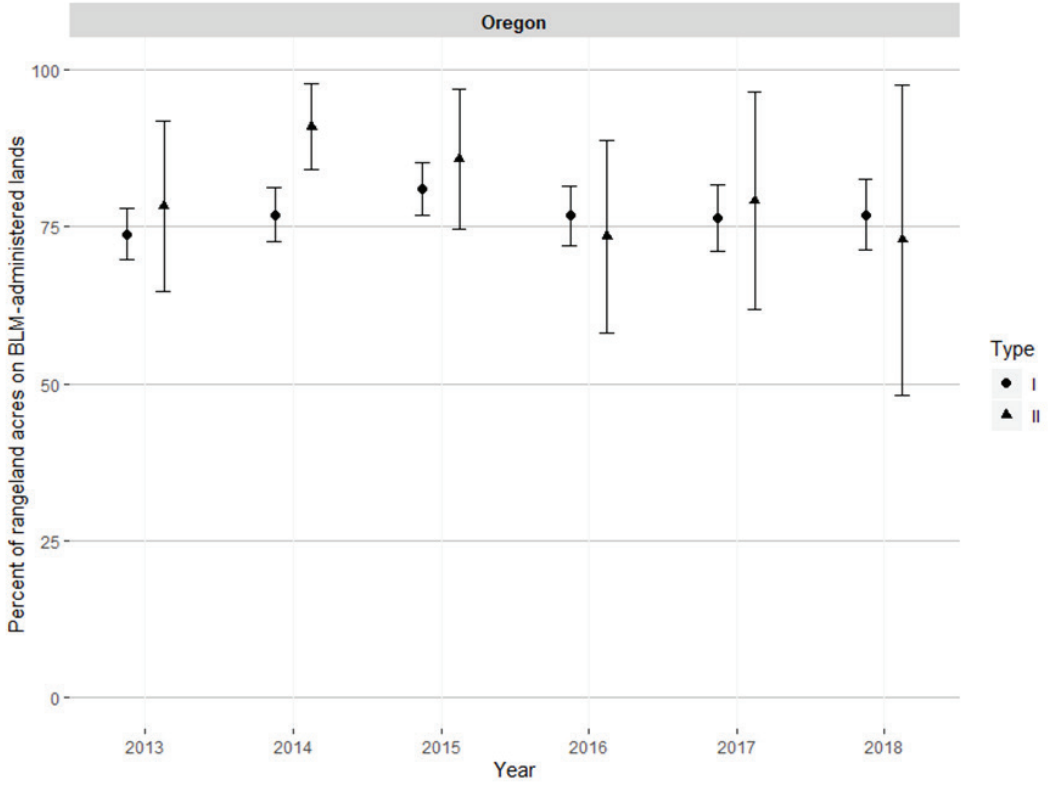



**Figure 10.** Proportion of BLM rangelands with nonnative invasive species present (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) in Oregon.

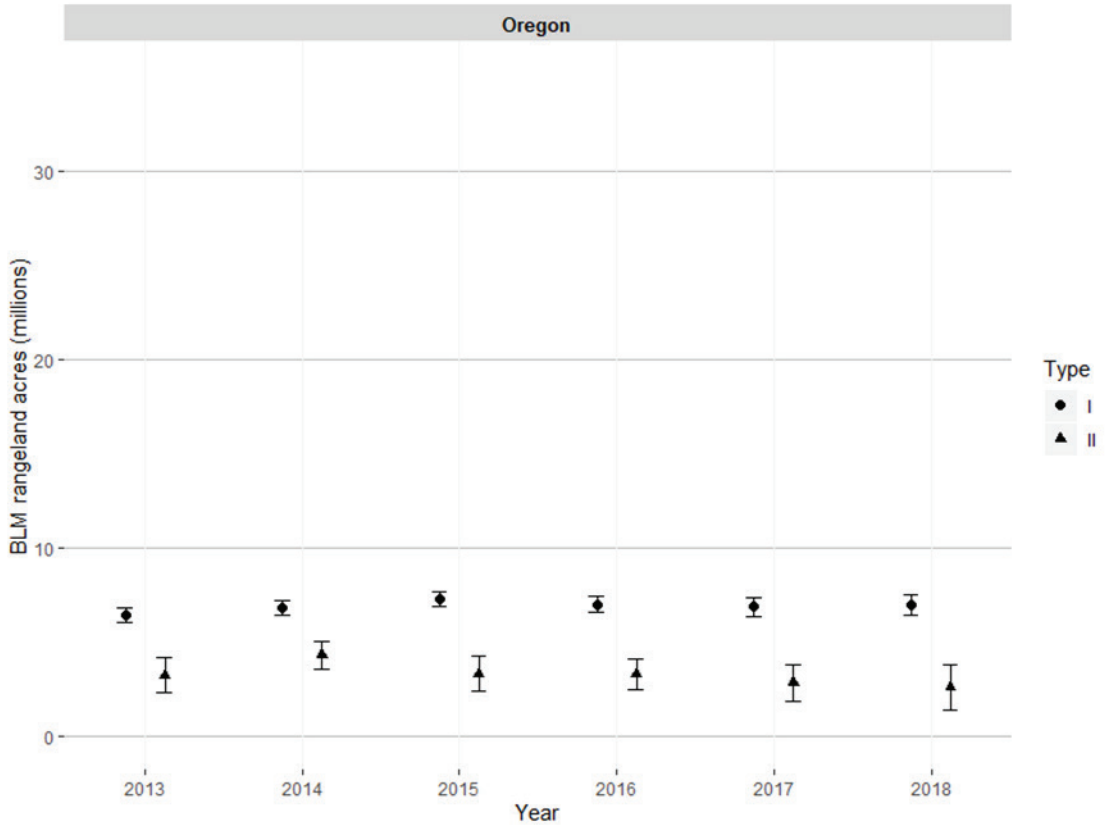



**Figure 11.** BLM rangeland acres with nonnative invasive species present (80% confidence interval) in sage-grouse habitat (type I) and nonhabitat (type II) in Oregon.

## 1.2. Seasonal habitat conditions

**Breeding Season Habitat (table 1)**

- Fewer than one-half of the plots in PHMA and GHMA provided adequate sagebrush cover for sage-grouse nesting and early brood-rearing. Of the plots that did not meet the desired percent sagebrush canopy cover, 54% in PHMA and 78% in GHMA provided less than 15% cover.
- Hiding cover for sage-grouse nesting and brood-rearing appears adequate, based on the proportion of plots meeting the desired conditions for perennial grass cover, sagebrush height, and herbaceous height. While most plots in PHMA and GHMA did not meet the perennial gross cover objective, >60% of these plots had more perennial grass cover than the objective.
- Perennial forb cover was less than desired conditions on 59% and 69% of plots in PHMA and GHMA, respectively.

**Table 1.** Sage-Grouse Breeding Season Habitat Indicators in Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (GHMA) in Oregon. Plots are AIM and LMF data.

| Breeding | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Cover | 10–25% | 421 | 42.7% | 566 | 57.3% | | 0.0% | 987 |
| Sagebrush Height | Arid: 11–31 inch | 431 | 67.6% | 91 | 14.3% | 116 | 18.2% | 638 |
| | Mesic: 15–31 inch | 105 | 30.1% | 179 | 51.3% | 65 | 18.6% | 349 |
| Perennial Grass Cover | Warm–Dry: 10–30% | 220 | 39.1% | 342 | 60.9% | | 0.0% | 562 |
| | Shallow–Dry: 10–25% | 43 | 56.6% | 33 | 43.4% | | 0.0% | 76 |
| | Cool–Moist: 20–45% | 187 | 53.6% | 162 | 46.4% | | 0.0% | 349 |
| Perennial Grass-Forb Height | Warm–Dry: ≥ 7 inch | 497 | 88.4% | 65 | 11.6% | | 0.0% | 562 |
| | Cool–Moist: ≥ 9 inch | 250 | 71.6% | 99 | 28.4% | | 0.0% | 349 |
| Perennial Forb Cover | Arid: 2–10% | 314 | 49.2% | 324 | 50.8% | | 0.0% | 638 |
| | Mesic: 6–12% | 90 | 25.8% | 259 | 74.2% | | 0.0% | 349 |
| **GHMA** | | | | | | | | |
| Sagebrush Cover | 10–25% | 293 | 46.1% | 343 | 53.9% | | 0.0% | 636 |
| Sagebrush Height | Arid: 11–31 inch | 336 | 64.9% | 54 | 10.4% | 116 | 18.2% | 518 |
| | Mesic: 15–31 inch | 48 | 40.7% | 55 | 46.6% | 65 | 18.6% | 118 |
| Perennial Grass Cover | Warm–Dry: 10–30% | 202 | 41.7% | 282 | 58.3% | | 0.0% | 484 |
| | Shallow–Dry: 10–25% | 17 | 50.0% | 17 | 50.0% | | 0.0% | 34 |
| | Cool–Moist: 20–45% | 75 | 63.6% | 43 | 36.4% | | 0.0% | 118 |
| Perennial Grass-Forb Height | Warm–Dry: ≥ 7 inch | 326 | 67.4% | 154 | 31.8% | 4 | 0.8% | 484 |
| | Cool–Moist: ≥ 9 inch | 68 | 57.6% | 50 | 42.4% | | 0.0% | 118 |
| Perennial Forb Cover | Arid: 2–10% | 171 | 33.0% | 347 | 67.0% | | 0.0% | 518 |
| | Mesic: 6–12% | 24 | 20.3% | 94 | 79.7% | | 0.0% | 118 |

### Summer Season Habitat (table 2)

- Fewer than one-half of the plots in PHMA and GHMA met the desired condition for percent sagebrush cover or sagebrush height in late-brood rearing and summering habitat.
- Fewer than one-half of the plots in PHMA and GHMA met the desired condition for perennial herbaceous cover. However, 78% of plots not meeting the objective in PHMA exceeded the upper end of the desired condition (i.e., they had too much cover). In GHMA, 40% of the plots that didn't meet the objective had higher amount of herbaceous cover than the desired condition.
- Most (77%) of the 30 riparian and wet meadow areas assessed in PHMA/GHMA were in Proper Functioning Condition (PFC).

**Table 2.** Sage-Grouse Summer Season Habitat Indicators in Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (GHMA) in Oregon. Plots are AIM and LMF data.

| Summer | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Cover | 10–25% | 247 | 39.6% | 376 | 60.4% | | 0.0% | 623 |
| Sagebrush Height | 15–31 inch | 234 | 37.6% | 283 | 45.4% | 106 | 17.0% | 623 |
| Perennial Grass Cover | Warm–Dry: 15–30% | 70 | 26.4% | 195 | 73.6% | | 0.0% | 265 |
| | Shallow–Dry: 10–25% | 19 | 37.3% | 32 | 62.7% | | 0.0% | 51 |
| | Cool–Moist: 20–45% | 173 | 56.4% | 134 | 43.6% | | 0.0% | 307 |
| Riparian Areas | Proper Functioning Condition | 10 | 83.3% | 2 | 16.7% | | 0.0% | 12 |
| **GHMA** | | | | | | | | |
| Sagebrush Cover | 10–25% | 234 | 46.5% | 269 | 53.9% | | 0.0% | 503 |
| Sagebrush Height | 15–31 inch | 249 | 49.5% | 131 | 26.0% | 123 | 24.5% | 503 |
| Perennial Grass Cover | Warm–Dry: 15–30% | 99 | 28.1% | 253 | 71.9% | | 0.0% | 352 |
| | Shallow–Dry: 10–25% | 3 | 17.6% | 14 | 82.4% | | 0.0% | 17 |
| | Cool–Moist: 20–45% | 79 | 59.0% | 55 | 41.0% | | 0.0% | 134 |
| Riparian Areas | Proper Functioning Condition | 10 | 72.2% | 5 | 27.8% | | 0.0% | 18 |

**Winter Season Habitat (table 3)**

- Sagebrush cover above snow met the desired condition in over 50% of plots in PHMA and GHMA.
- Sagebrush plants were generally tall enough to protrude above mean snow height or were present in the plot to measure height.
- Approximately 58.7% and 58.3% of plots did provide adequate sagebrush height for winter forage in PHMA and GHMA, respectively.

**Table 3.** Sage-Grouse Winter Season Habitat Indicators in Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (GHMA) in Oregon. Plots are AIM and LMF data.

| Winter | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Cover Above Snow | ≥ 10% | 1,233 | 63.8% | 701 | 36.2% | | 0.0% | 1,934 |
| Sagebrush Height Above Snow | ≥ 10 inch | 1,136 | 58.7% | 494 | 25.5% | 304 | 15.7% | 1,934 |
| **GHMA** | | | | | | | | |
| Sagebrush Cover | ≥ 10% | 746 | 56.5% | 575 | 43.5% | | 0.0% | 1,321 |
| Sagebrush Height | ≥ 10 inch | 770 | 58.3% | 285 | 21.6% | 266 | 20.1% | 1,321 |

## 1.3. Adaptive management habitat triggers

Sagebrush habitat in the Cow Lakes and Trout Creek PACs was below the soft trigger threshold (i.e., <65 percent current habitat) prior to 2015 and has remained below the soft trigger despite active management to restore sagebrush cover and reduce the cover of juniper and invasive plants. The historic (1960s) Vale Seeding Project and multiple wildfires removed sagebrush from large sections of the Cow Lakes PAC. Sagebrush cover has been slow to recover, and nonnative annual grass has invaded most sagebrush communities. The Holloway and Long Draw fires in 2012 burned 271,884 acres (69%) of sage-grouse habitat within the Trout Creeks PAC. Wildfire habitat loss in the Cow Lakes and Trout Creek PACs since 2013 has been minimal.

## 2. Land Health Standards Evaluations

BLM completed 89 Land Health Standards evaluations in PHMA and GHMA during 2015-2018 on the BLM's Lakeview, Prineville, Burns and Vale districts (table 4). All Land Health Standards were met (Category A Allotments) on 70% of allotments consisting of 1,154,284 acres. Grazing was identified as a causal factor for 14 allotments not meeting a LHS (Category B Allotment). Standard 5 was not being met on 6 allotments (17,906 acres) due to factors other than grazing. Appropriate management actions were implemented on allotments not meeting to move these allotments toward achieving standards and guidelines in the future.

**Table 4.** Land Health Standards Evaluations on BLM Grazing Allotments in PHMA and GHMA in Oregon Completed during 2015-2018

| | BLM District | | | | |
|---|---|---|---|---|---|
| | Lakeview | Prineville | Burns | Vale | Total |
| Number of allotments assessed | 14 | 14 | 33 | 28 | 89 |
| Allotment acres assessed | 419,942 | 68,225 | 921,567 | 44,670 | 1,454,404 |
| Number of allotment meeting all LHS: Category A Allotment | 8 | 12 | 32 | 10 | 62 |
| Acres meeting all LHS | 182,090 | 61,240 | 898,342 | 12,612 | 1,154,284 |
| Number of allotments not meeting one or more LHS | 6 | 2 | 1 | 18 | 27 |
| Acres not meeting one or more LHS | 237,852 | 6,985 | 23,225 | 32,058 | 300,120 |
| Number of allotments with grazing a causal factor: Category B Allotment | 2 | 2 | 0 | 10 | 14 |
| Number of allotments not meeting Standard 5 | 0 | 0 | 0 | 6 | 6 |
| Number of allotments not meeting Standard 5 and grazing a causal factor | 0 | 0 | 0 | 0 | 0 |

## 3. Surface Disturbance in PHMA

Since 2015, the BLM has authorized two surface-disturbing activities in PHMA. Both authorizations allowed the expansion of existing locatable mineral developments totaling approximately 126.6 acres of new surface disturbance within the Warners PAC in the Lakeview District. Project-scale surface disturbance was <0.5 percent in both authorizations.

## 4. Sage-Grouse Population Trends

Since 2015, 12 PACs have tripped a population trigger (table 5). The Baker PAC population has been in hard trigger status every year. After tripping a soft population trigger, continued downward estimates for 3 PACs has caused them to trip the hard population trigger, bringing the total number of population hard-trigger PACs in 2019 to 4. In contrast to these declines, the Paulina/12-Mile PAC exhibited strong enough growth in 2017 to rise above the soft trigger. More population triggers were exceeded in 2019 than in the previous 4 years (table 5). While the trigger status of 7 PACs did not change from the previous year, the annual population decline was large enough in 4 other PACs to cause them to trip a soft population trigger for the first time, bringing the total number of soft-trigger PACs in 2019 to 7.

**Table 5.** Population Trigger Summary by Year

| Year | Oregon PACs where Soft Population Triggers Tripped | Oregon PACs where Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| 2015 | Cow Lakes<br>Dry Valley/Jack Mountain<br>Paulina/12-Mile | Baker | Primary causes are wildfires and invasive annual grasses.<br><br>Secondary causes are isolated/small size; agriculture (Baker); infrastructure; historic sagebrush elimination (Cow Lakes); recreation (Baker); predators; native understory condition; prolonged drought; West Nile virus (Cow Lakes); habitat fragmentation; fence collisions; crested wheatgrass seedings |
| 2016 | Cow Lakes<br>Dry Valley/Jack Mountain<br>Paulina/12-Mile<br>Crowley<br>Picture Rock<br>Warners<br>Brothers/N. Wagontire | Baker | Same as above, plus juniper encroachment (Warners & Picture Rock); wild horses (Crowley); sage-grouse translocations & research (Warners); hunting & mining (Brothers/N. Wagontire) |
| 2017 | Cow Lakes<br>Crowley<br>Warners<br>Brothers/N. Wagontire | Baker<br>Dry Valley/Jack Mtn<br>Picture Rock | Same as above |
| 2018 | Cow Lakes<br>Crowley<br>Warners | Baker<br>Dry Valley/Jack Mtn<br>Picture Rock<br>Brothers/N. Wagontire | Same as above |
| 2019 | Cow Lakes<br>Crowley<br>Warners<br>Beatys<br>Drewsey<br>Pueblos/S. Steens<br>Steens | Baker<br>Dry Valley/Jack Mtn<br>Picture Rock<br>Brothers/N. Wagontire | Same as above<br><br>Analysis in progress for Beatys, Drewsey, Pueblos/S. and Steens. Wet spring may have impacted lekking behavior across Oregon |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data as described above. In some cases, the rangewide datasets do not directly answer the question in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The 2015 Oregon ARMPA includes objectives for the proportion of each seasonal habitat meeting "a majority of the desired habitat conditions." The BLM uses site-scale habitat assessments to evaluate this objective following the process outlined in the Sage-Grouse Habitat Assessment Framework Technical

Reference 6701-1 and associated BLM implementation guidance. In this process, each monitoring plot is rated suitable, marginal, or unsuitable based on the BLM's interpretation of the suite of indicators. Estimates of the proportion of the seasonal habitat across a biologically relevant area that is in each suitability class can then be made if monitoring efforts stemmed from a probabilistic sample design (i.e., AIM and LMF). Evaluating how much of a seasonal habitat is meeting or not meeting each of the indicators individually is most appropriate when investigating the cause for unsuitable or marginal site-scale habitat ratings and developing management actions to address them. In Oregon, site-scale suitability determinations have been completed for most sage-grouse habitat within the BLM Lakeview District and is underway in Prineville, Burns and Vale districts.

The summary of data in this report is a plot summary that does not include a weighted estimate of area of suitability. Therefore, the results do not provide the data to assess the landscape context objective, nor does the summary represent seasonal habitat suitability, site scale suitability, or site potential. Instead, the BLM has answered the question of whether the plan's habitat objectives are being met with a summary of data that informs each habitat indicator across the seasonal habitats and within PHMA/GHMA. To be clear, the BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM, nor can they be achieved on every acre (e.g., due to ecological site potential) of designated sage-grouse habitat BLM manages. The indicators do, however, provide a suite of habitat characteristics that help inform BLM when developing and implementing management decisions and projects within sage-grouse habitat. Following is a season-by-season conclusion from the summary data.

***Breeding Habitat***

Fewer than one-half of the plots provided desired percent sagebrush cover, with more plots providing too little cover (<15%) than too much (>25%). Adequate sagebrush cover is crucial for nesting (most nest sites are under sagebrush plants that have large canopies) and predator avoidance. Perennial forb cover (critical food resource for pre-laying hens and broods) also was below desired conditions in both PHMA and GHMA. Finally, while most plots did not meet the perennial grass cover objective, >60% of these plots had more perennial grass cover than the objective. Too much grass cover is unlikely to be a problem in nesting and early brood-rearing habitat since vegetation cover provides visual protection from predators. Moreover, herbaceous height met the plan objective in 82% and 65% of plots in PHMA and GHMA, respectively.

The primary factors reducing sagebrush canopy cover in Oregon are historic (1960s) sagebrush removal projects (e.g., Vale Project in Cow Lakes PAC), sagebrush defoliator moth (*Aroga websteri*), wildfire, invasive annual grasses, and western juniper encroachment. Approximately 2.8 million acres of sage-grouse habitat in Oregon is affected by juniper encroachment. Juniper is present on an estimated 8 to 9 percent of the area within 1 mile of leks and on 14 to 18 percent of the area within 4 miles of leks. Wildfires burned 1,014,661 acres of sage-grouse habitat in Oregon in 2012. The Holloway and Long Draw fires burned 271,884 acres (69%) of sage-grouse habitat within the Trout Creeks PAC. Since 2013, however, the percent cover of sagebrush, herbaceous, and perennial grass/forb in sage-grouse habitat state-wide has changed very little (figures 2, 6, and 7), while the percent annual grass cover has increased (figure 9).

Strategically placed habitat restoration and conservation projects at appropriate scale on public and private lands reduce habitat loss and can positively affect sage-grouse populations. Since 2012, the BLM has completed approximately 230,000 acres of vegetation treatments within six PACs that tripped adaptive management triggers or were close to tripping a trigger. Habitat restoration in the Cow Lakes PAC, for example, has included almost 10,000 acres of sagebrush planting and over 12,000 acres of chemical treatment of invasive annual grasses. Post-fire treatments in the Trout Creeks PAC have included seeding and chemical treatments on 64,656 acres. However, sagebrush cover is slow to recover after fire, and the increase of nonnative annual grass impedes recovery of native vegetation. Thus, vegetation treatments during the last 5 years are unlikely to translate to increased sage-grouse populations in the short-term.

***Summer Habitat***

Fewer than one-half of the plots in PHMA and GHMA met the sagebrush cover and height objectives. Sagebrush height and cover in plots not meeting desired conditions was more often below the desired level than above it. Mesic sites are particularly prone to western juniper encroachment which can result in near total loss of sagebrush canopy cover.

During summer, as sagebrush habitats desiccate, females and broods usually move to higher elevation sagebrush communities, riparian areas, wet meadows, or in some cases sagebrush communities near agricultural lands where succulent plants and an abundance of insects are available. Most (>70%) of the 30 riparian and wet meadow areas assessed were in Proper Functioning Condition (PFC). Riparian areas with a PFC rating are assumed to provide adequate food and shelter for sage-grouse during late-brood rearing and summer

***Winter Habitat***

Winter areas must have sagebrush of sufficient height and canopy cover to provide food and cover under most snow conditions. The BLM estimated average annual snow depth at plots from the 50th percentile of the 15-year average. Sagebrush cover and height met desired conditions on the majority of plots. Sagebrush height is not as important as cover, since sage-grouse in Oregon typically winter in low sagebrush communities or in a mosaic of low and big sagebrush types, commonly on windswept ridges with less snow. Low sagebrush communities provide food and daytime loafing, while adjacent big sagebrush communities provide cover and when weather conditions make the low sage areas unavailable.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   The BLM administers 783 allotments on 9,982,126 acres containing either PHMA or GHMA in Oregon. During 2015-2018, land health assessments were completed on 89 of these allotments containing 1,454,404 acres. All LHS were met on 70% of the allotments consisting of 1,154,284 acres. Standard 5 was not met on 6 allotments (17,906 acres) due to factors other than grazing. Livestock grazing was identified as a significant factor for 14 allotments. On the 13 allotments where livestock grazing was not a significant factor, other factors were identified for failure to achieve all standards. Factors that may influence ability to achieve standards include but are not limited to invasive plants, encroachment of juniper into sagebrush and other habitats, fire, and human disturbances such as energy development or off-road vehicle use. Appropriate management actions have been implemented to move these allotments toward achieving standards and guidelines in the future.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   The BLM's disturbance objectives, as outlined in the ARMPA appendix E, apply at two spatial scales: Oregon PAC and project area. The objectives were met at both scales (i.e., total disturbance did not exceed 3% and 1% per decade). Since 2015, the BLM has approved two mine expansion projects subject to the disturbance cap. The relatively small amount of new ground disturbance (127 acres) is consistent with long-term trends in mining development in eastern Oregon. Implementing the disturbance cap appears to be steering new development that is potentially harmful to sage-grouse away from the highest priority habitat.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The Oregon sage-grouse population experienced 3 consecutive years of growth during 2014-2016, followed by 3 years of decline. The peak in 2016 and trough in 2019 were lower than the previous two population cycles, indicating reduced resiliency and overall downward trend since 2006 (figure 12). Magnitude of

population trend since 2015 has been variable across the state, with some PAC populations increasing while others were decreasing in the same year. For example, the Paulina/12-Mile PAC population grew enough in 2018 to rise above the soft trigger, while the Baker PAC continued to decline. In 2019, the state-wide population decreased 25 percent to an estimated 13,827 individuals. This population is more than 50% below the ODFW population goal of approximately 30,000 individuals (figure 12). Declines in 2019 were observed in 17 of 19 Oregon PACs where enough data was available to analyze trend. Additional information on Oregon sage-grouse population status can be found in the **Oregon Greater Sage-Grouse Population Monitoring: 2019 Annual Report**.

Annual variation in environmental and resource conditions will cause population numbers to fluctuate around the thresholds specified in the ARMPA. Given these fluctuations, the ARMPA based population triggers on a 5-year moving average (a 3-year decline is not uncommon with sage-grouse). When it set the soft population trigger, the BLM anticipated tripping it would be an infrequent but not unusual event and would provide time for BLM to adjust land management before reaching the hard trigger. On the other hand, exceeding a hard trigger threshold would indicate a more serious problem, because this threshold is based on more extreme or prolonged decline. When the Adaptive Management Strategy was implemented in 2015, 3 PACs had soft population triggers and 1 PAC had tripped a hard population trigger. After the 2019 lek monitoring season was over, 7 PACs had tripped soft population triggers and 4 had tripped hard population triggers. Although no new hard trigger thresholds were exceeded, 4 PACs tripped a soft population trigger for the first time in 2019. Note that Cow Lakes PAC tripped a soft trigger both for population and for habitat; thus, in the ARMPA, Cow Lakes also tripped a hard trigger.

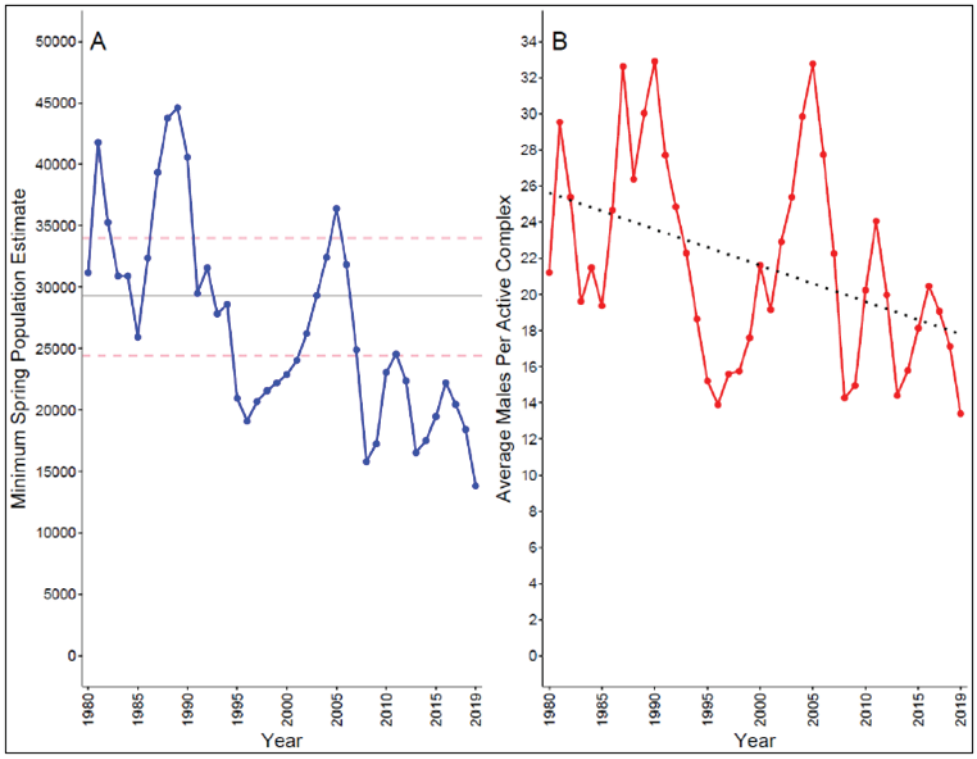



**Figure 12.** Greater sage-grouse population trends in Oregon, 1980–2019. A - Estimated spring breeding population, gray line indicates 2003 baseline population level, pink dotted lines indicate the 95% confidence interval. B - Change in average lek complex size (males per active lek complex). Source: Lee Foster, Oregon Department of Fish and Wildlife, Oregon Greater Sage-Grouse Population Monitoring: 2019 Annual Report.

When an adaptive management trigger is tripped, the BLM conducts an analysis of existing conditions and trends in the PAC to identify and address any apparent cause(s) for decline. Causal Factor Analysis (CFA) reports have been completed for the eight Oregon PACs that had tripped a trigger prior to 2019. Analysis of the four PACs that tripped a soft population trigger for the first time in 2019 will need to address whether the decline is part of a cyclical pattern or due to weather affecting male lek attendance and lek counts. Weather conditions in the early breeding season may have been a contributing factor in the decline. The onset of lekking was delayed approximately 2 weeks, and during the first half of April rainy weather was common across southeastern Oregon. The extent to which unusual weather conditions may have caused triggers to trip in 2019 will not be known until lek counts are completed in 2020. If the soft trigger remains in 2020, the CFA will need to examine other possible causes.

The reasons for sage-grouse population losses in Oregon likely are the cumulative effects of habitat loss and degradation, changes in predator control measures, increases in human disturbance, and, more recently, climate change. With the hypothetical continuation of current climate conditions across much of the sage-grouse range (i.e., more variable and severe weather events, higher temperatures, drier summer soil conditions, and rainier winter seasons), some climate change models predict a steady decline in sage-grouse habitat throughout the century to less than half of the initial level. If this prediction holds true, habitat loss and degradation are likely to depress sage-grouse population cycles long into the future.

In conclusion, this appendix to the Rangewide GRSG Monitoring report is an implementation monitoring report rather than an assessment of effectiveness of the conservation measures in the 2015 sage-grouse land use plans. It provides some trend information but is primarily a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

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U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 13: Utah State Office Monitoring Report for the 2015 Utah Land Use Plan Amendment

2015–2020

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# Appendix 13: Utah State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 13: Utah State Office Monitoring Report for the 2015 Utah Land Use Plan Amendment

## 2015–2020

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# Introduction

This BLM Utah State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Report). This appendix describes the methods, datasets, and results of implementation and monitoring of GRSG conservation measures from land use amendments and revision in Utah covered by the 2015 GRSG Records of Decision (RODs). The BLM Rangewide GRSG Report contains the results of the BLM's 2015 planning-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS National Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (5 questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan (LUP) amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the 14 revisions within Utah and answers the following four questions:

1. Are the plans meeting the GRSG habitat objectives?
2. Are GRSG Habitat Management Areas (HMAs) within the LUP area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Are the efforts described and implemented in the ARMPA plan meeting the disturbance objective(s) within GRSG areas?
4. Are the GRSG populations within this plan boundary and within the GRSG HMAs increasing, stable, or declining?

# Methods

Within the 14 BLM planning areas in Utah that contain GRSG habitat, the following factors were evaluated utilizing the methods described below. These factors were identified to help answer the four conservation measure questions previously identified in this report and located in appendix D of the Utah Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA 2015).

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1 Habitat conditions statewide

Summaries of 11 indicators of importance to sage-grouse rangewide were generated within Greater Sage-Grouse habitat (type I) and outside of Greater Sage-Grouse habitat (type II) on BLM lands in Utah. The type I and type II differentiation was made in 2012 to facilitate monitoring design development, prior to the LUP finalization. Therefore they do not align with the HMA designations exactly. These indicators are generally recognized as important components of Greater Sage-Grouse Habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Table. These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the

Rangewide report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 — **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

### 1.2 Habitat conditions within seasonal habitats

Summaries of Landscape Monitoring Framework and field-office collected AIM data were generated to evaluate if quantitative habitat objectives, as detailed in the LUP Habitat Objectives Table, were met within seasonal habitats in Priority and General Habitat Management Areas (PHMA/GHMA). Each habitat summary reflects data collected inside the date ranges associated with seasonal use periods as identified in mapped seasonal habitat used by the State of Utah Division of Wildlife Resources (DWR). These summaries provide the number of indicators that are rated as suitable, marginal, and unsuitable when compared to Utah's specific indicator benchmarks. They are not weighted to represent the overall area sampled but are evaluated individually.

To evaluate winter habitat sagebrush height above snow, a model was created using National Climate Data Center of the US Department of Commerce National Oceanic and Atmospheric Administration annual snowpack data. Snow depth on an average year from 2004-2018 was modeled using this data and these numbers were then compared to average (shrub) woody height at each site.

### 1.3 Habitat conditions – adaptive management habitat triggers

Utah's 2015 ARMPA, including MA-SSS-7 and appendix I: Adaptive Management, identify a strategy and actions for GRSG in Utah. The strategy identifies a two-tiered system of adaptive management soft and hard triggers. These triggers act as a threshold; if available habitat acres fall below the established threshold, the BLM will adapt its management of resources within GRSG habitat to directly address the reasons behind the declines (if known). If triggers are met, BLM Utah follows certain measures in the 2015 ARMPA, as well as an adaptive management response based on the cause for habitat loss. The adaptive management response is designed to provide certainty for effectiveness of the BLM's conservation objectives and management actions. Habitat triggers are evaluated against the baseline acres of habitat as described in the 2015 RODs. Habitat loss and gains are calculated yearly based on known wildfires and habitat improvement projects within GRSG habitat. Information from the BLM and the State of Utah Watershed Restoration Initiative are used in the calculation of habitat loss or gains and then reviewed by the BLM and its partners in GRSG management.

These methods apply to the Utah BLM planning area. The Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the Biologically Significant Unit (BSU) scale.

## 2. Land Health Standards (LHS) Evaluations

BLM Utah has four Rangeland Health Standards. Standard three applies to wildlife special-status species, including GRSG, and evaluates whether they are maintained at a level appropriate for the site and species involved. Local Utah BLM field offices following the guidance of BLM Handbook 4180-1, Rangeland

Health Standards, evaluate this standard based on professional interpretations of resource conditions using indicators to the standard. To complete LHS Evaluations, field offices organize interdisciplinary teams (ID teams) which consist of resource specialists who can provide professional interpretations of the status of land health. Data from monitoring and assessment protocols such as the Assessment Inventory Monitoring (AIM) terrestrial strategy, Interpreting Indicators of Rangeland Health (IIRH), Ecological Site Inventory (ESI), upland trend sites, Aquatic AIM, Multiple Indicator Monitoring (MIM) and Proper Functioning Condition (PFC) are used to assess habitat conditions for GRSG. Washington Office Instruction Memorandums 2016-144 and 2018-021, Gunnison and Greater Sage-Grouse (Including the Bi-State Distinct Population Segment) Habitat Assessment Policy, are followed, as applicable, in the evaluation of standard three for these LHS evaluations.

Data compiled for this report were collected from the 2016-2019 Rangeland Inventory Monitoring Evaluation (RIME) report, and a field office data call which was used to validate and refine the information in the RIME report. The RIME report collects data from field offices on grazing allotments for which LHS Evaluations are completed. The report details allotments that are meeting LHS, not meeting LHS, and if changes were implemented to make significant progress towards meeting LHS as required by 43 CFR 4180.

# 3. Surface Disturbance in PHMA

The USFWS 2010 listing decision for GRSG details specific threats contributing to habitat degradation (see table 9). The Utah ARMPA tracks this degradation in the two ways described below.

## 3.1 Disturbance cap

### 3.1.1 Project-Level Disturbance

The Utah ARMPA has a disturbance cap of 3 percent for each new project authorized within a BSU (see appendix E of Utah ARMPA for disturbance cap guidance). This is calculated by dividing the acreage in PHMA of new and existing disturbance activities associated with the specific GRSG threats in table 7 by the acreage in PHMA affected by a proposed project. All new disturbance activities are tracked within the Surface Disturbance and Reclamation Tracking Tool (SDARTT) for Utah. A data call was completed in Spring of 2020 to compare projects in the BLM's ePlanning system to projects in the SDARTT system. Any projects authorized but not yet shown in the SDARTT system were added.

### 3.1.2 BSU Disturbance

The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.

## 3.2 Density cap

The Utah ARMPA has also incorporated a cap on the density of energy and mining facilities at an average of 1 facility per 640 acres within a project analysis area. The categories of energy and mining facilities that count towards the density cap were also identified by the USFWS 2010 listing decision for GRSG as shown in table 9. Density caps in Utah are also tracked using SDARTT.

## 4. GRSG Population Trends – Adaptive Management Population Triggers

As described in Section 1.3, Utah's ARMPA identifies an adaptive management strategy and associated actions for GRSG in Utah. This strategy also applies to GRSG population trends.

Population triggers are evaluated against the 10-year, 6-year, and 4-year count of lek attendance numbers as determined by the State of Utah's lek survey protocol. Lek counts are used to detect long and short-term trend to ensure populations remain stable, or to alert the BLM and the State of Utah of declines that are then addressed by adaptive management actions specified in the ARMPA.

Yearly the State of Utah DWR assesses lek count trends and provides reports to the Utah BLM for each BSU. These reports are then discussed with partners in GRSG management and local field offices to determine management actions that could address any declining populations. For hard triggers, the ARMPA details implementation of specific management actions.

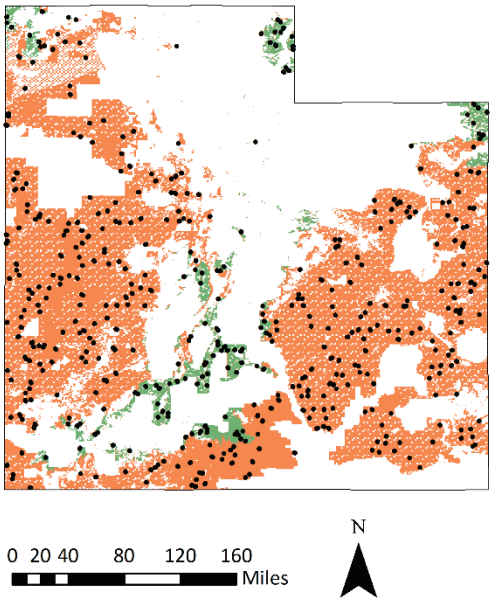
For this report, yearly data from 2017 to 2019 are summarized (see table 10).

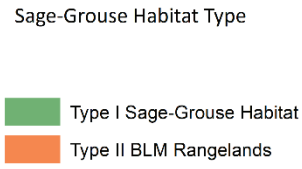
# Results

This section describes the results of implementation and monitoring of GRSG LUP conservation measures by summarizing four factors described previously: habitat conditions, LHS evaluations, surface disturbance in PHMA, and GRSG population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | UT | 38 | 1,738,155 |
| 2013 | II | UT | 105 | 14,773,566 |
| 2014 | I | UT | 41 | 1,760,856 |
| 2014 | II | UT | 123 | 20,266,244 |
| 2015 | I | UT | 34 | 1,515,574 |
| 2015 | II | UT | 125 | 20,053,055 |
| 2016 | I | UT | 52 | 1,755,810 |
| 2016 | II | UT | 144 | 20,526,373 |
| 2017 | I | UT | 26 | 1,651,098 |
| 2017 | II | UT | 84 | 18,451,253 |
| 2018 | I | UT | 20 | 1,317,680 |
| 2018 | II | UT | 87 | 19,205,191 |

**Figure 1.** Map of monitoring plot locations in the Landscape Monitoring Framework including plot count by year.

**Table 1.** Indicators of Habitat Condition for Greater Sage-Grouse within Habitat Areas (type I). Estimates include 80% confidence interval.

| Type I | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 10% (+5/-5) | 15% (+3/-3) | 12% (+6/-6) | 13% (+4/-4) | 11% (+4/-4) | 15% (+3/-3) |
| Mean sagebrush species height in inches on BLM rangelands | 19.37 (+3.29/-3.3) | 13.97 (+1.29/-1.3) | 16.57 (+3.82/-3.82) | 18.91 (+2.6/-2.6) | 12.91 (+1.45/-1.45) | 19.74 (+3.64/-3.63) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 31% (+15/-15) | 4% (+4/-4) | 25% (+11/-11) | 2% (+2/-2) | 27% (+12/-12) | 9% (+10/-9) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 69% (+15/-15) | 96% (+4/-4) | 75% (+11/-11) | 98% (+2/-2) | 73% (+12/-12) | 91% (+9/-10) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 32% (+6/-6) | 24% (+6/-6) | 21% (+5/-5) | 20% (+3/-3) | 35% (+10/-10) | 22% (+5/-5) |
| Mean herbaceous plant species height in inches on BLM rangelands | 7.78 (+1.14/-1.14) | 8.37 (+1.25/-1.25) | 8.87 (+1.56/-1.56) | 10 (+1.14/-1.14) | 7.57 (+0.82/-0.81) | 9.62 (+1.24/-1.24) |
| Percent cover of bare ground on BLM rangelands | 17% (+5/-5) | 19% (+4/-4) | 15% (+4/-4) | 20% (+5/-5) | 16% (+4/-4) | 15% (+4/-3) |
| Proportion of BLM rangelands with nonnative invasive species present | 35% (+15/-15) | 46% (+12/-12) | 32% (+9/-9) | 47% (+12/-12) | 59% (+19/-19) | 59% (+23/-23) |
| Proportion of BLM rangelands where ≥25% of foliar cover is comprised of nonnative invasive species | 8% (+8/-8) | 10% (+5/-5) | 14% (+8/-8) | 4% (+5/-4) | 11% (+11/-11) | 18% (+14/-14) |
| Proportion of vegetation composed of annual grasses on BLM rangelands | 3% (+2/-2) | 6% (+2/-2) | 5% (+3/-3) | 4% (+3/-3) | 8% (+6/-6) | 10% (+7/-7) |
| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 3% (+2/-2) | 6% (+2/-2) | 5% (+3/-3) | 5% (+3/-3) | 9% (+6/-6) | 13% (+11/-11) |

**Table 2.** Indicators of Habitat Condition for Greater Sage-Grouse Outside Habitat Areas (type II). Estimates include 80% confidence interval.

| Type II | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| Percent cover of sagebrush on BLM rangelands | 3% (+1/-1) | 4% (+1/-1) | 4% (+1/-1) | 5% (+1/-1) | 3% (+1/-1) | 3% (+1/-1) |
| Mean sagebrush species height in inches on BLM rangelands | 14.73 (+2.69/-2.68) | 11.74 (+1.5/-1.51) | 13.13 (+1.25/-1.24) | 15.36 (+1.69/-1.69) | 13.29 (+1.37/-1.38) | 13.21 (+1.71/-1.72) |
| Proportion of sagebrush that is columnar shaped on BLM rangelands | 17% (+9/-9) | 2% (+2/-2) | 28% (+8/-8) | 11% (+4/-4) | 20% (+8/-8) | 5% (+5/-5) |
| Proportion of sagebrush that is spreading shaped on BLM rangelands | 83% (+9/-9) | 98% (+2/-2) | 72% (+8/-8) | 89% (+4/-4) | 80% (+8/-8) | 95% (+5/-5) |
| Percent cover of perennial grasses and perennial forbs on BLM rangelands | 12% (+2/-2) | 12% (+2/-2) | 9% (+1/-1) | 12% (+2/-2) | 13% (+2/-2) | 9% (+1/-1) |
| Mean herbaceous plant species height in inches on BLM rangelands | 6.8 (+0.66/-0.66) | 6.22 (+0.48/-0.48) | 6.68 (+0.49/-0.48) | 8.45 (+0.67/-0.68) | 7.36 (+0.6/-0.6) | 6.59 (+0.51/-0.5) |
| Percent cover of bare ground on BLM rangelands | 30% (+4/-4) | 30% (+3/-3) | 34% (+3/-3) | 35% (+3/-3) | 33% (+4/-4) | 32% (+3/-3) |
| Proportion of BLM rangelands with nonnative invasive species present | 65% (+10/-10) | 56% (+7/-7) | 73% (+6/-6) | 82% (+5/-5) | 64% (+8/-8) | 71% (+8/-8) |
| Proportion of BLM rangelands where ≥25% of foliar cover is comprised of nonnative invasive species | 16% (+6/-6) | 31% (+5/-5) | 26% (+7/-7) | 27% (+6/-6) | 37% (+9/-9) | 40% (+9/-9) |
| Proportion of vegetation composed of annual grasses on BLM rangelands | 8% (+2/-2) | 11% (+3/-3) | 10% (+3/-3) | 12% (+3/-3) | 22% (+5/-5) | 19% (+4/-4) |
| Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands | 11% (+3/-3) | 17% (+3/-3) | 17% (+4/-4) | 16% (+3/-3) | 25% (+5/-5) | 22% (+4/-4) |

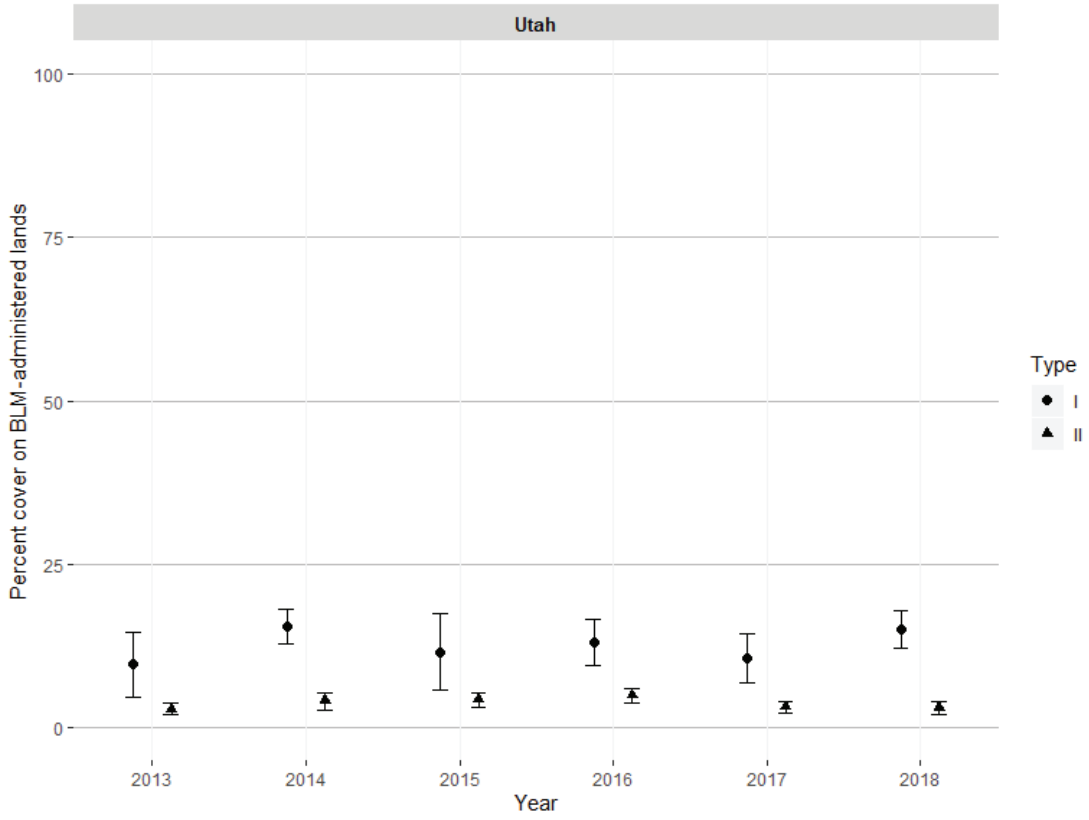



**Figure 2.** Percent cover of sagebrush on BLM rangelands (80% confidence interval).

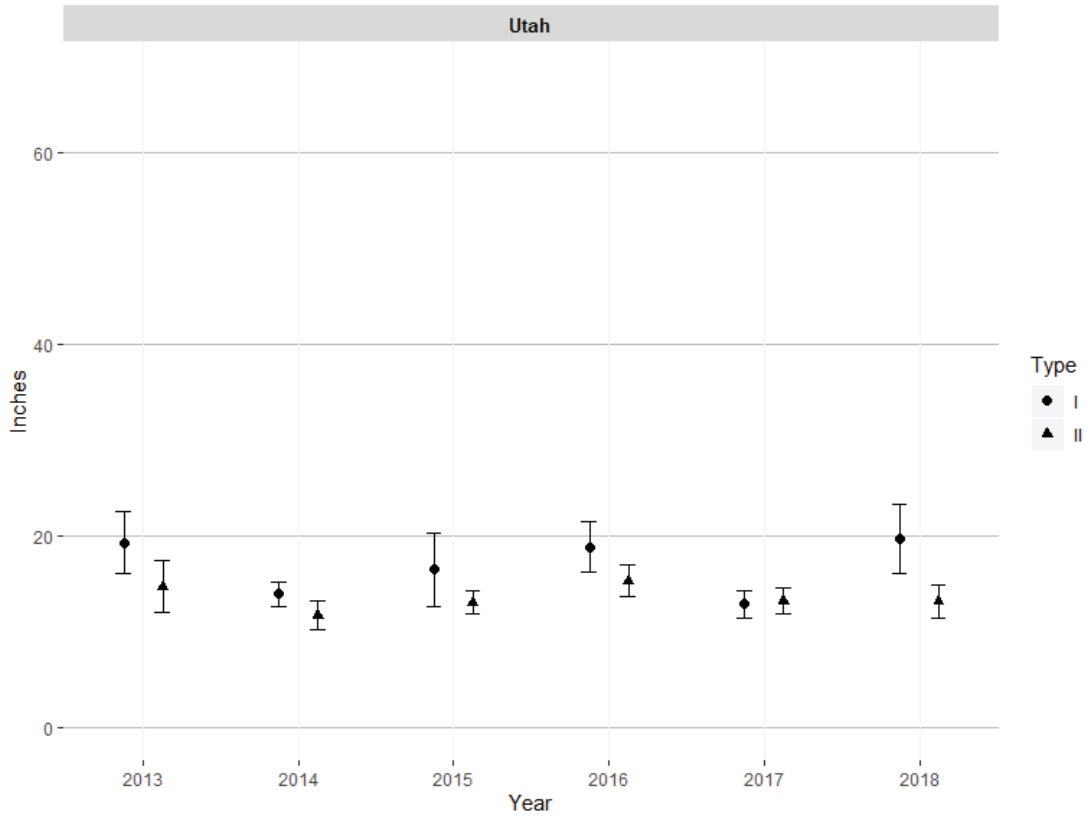



**Figure 3.** Mean sagebrush species height in inches on BLM rangelands (80% confidence interval).

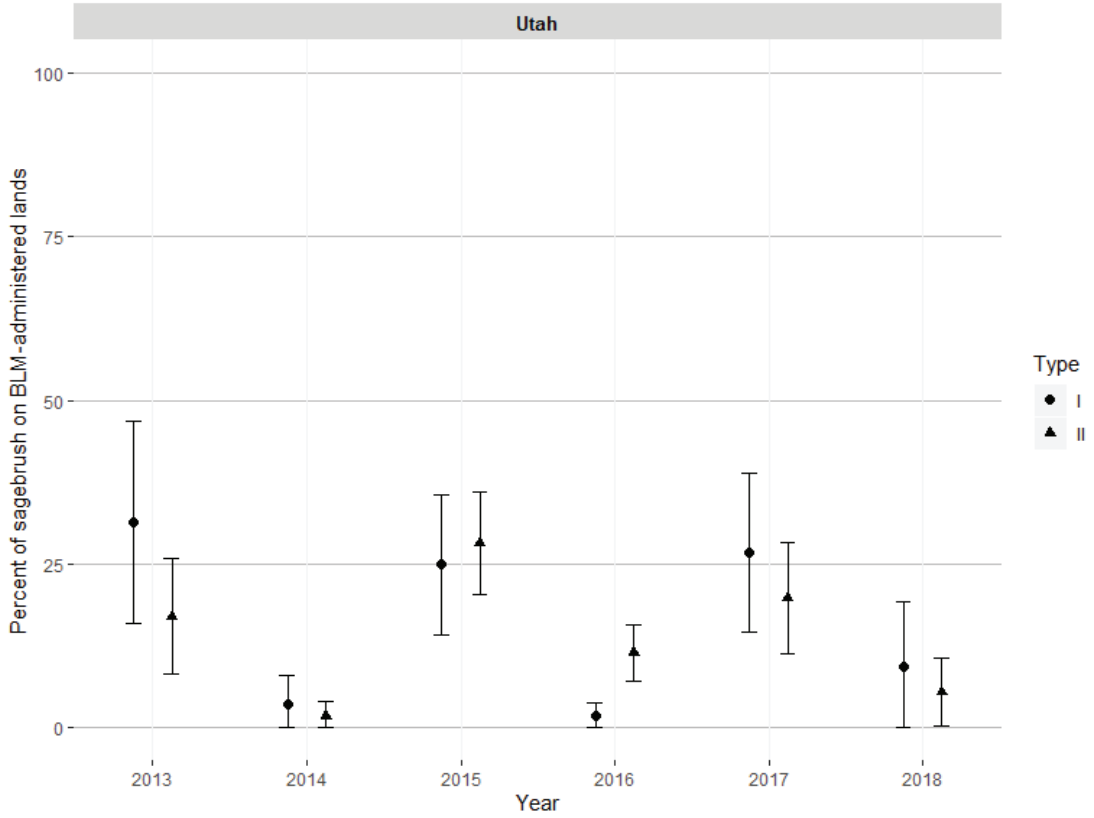



**Figure 4.** Proportion of sagebrush that is columnar shaped on BLM rangelands (80% confidence interval).

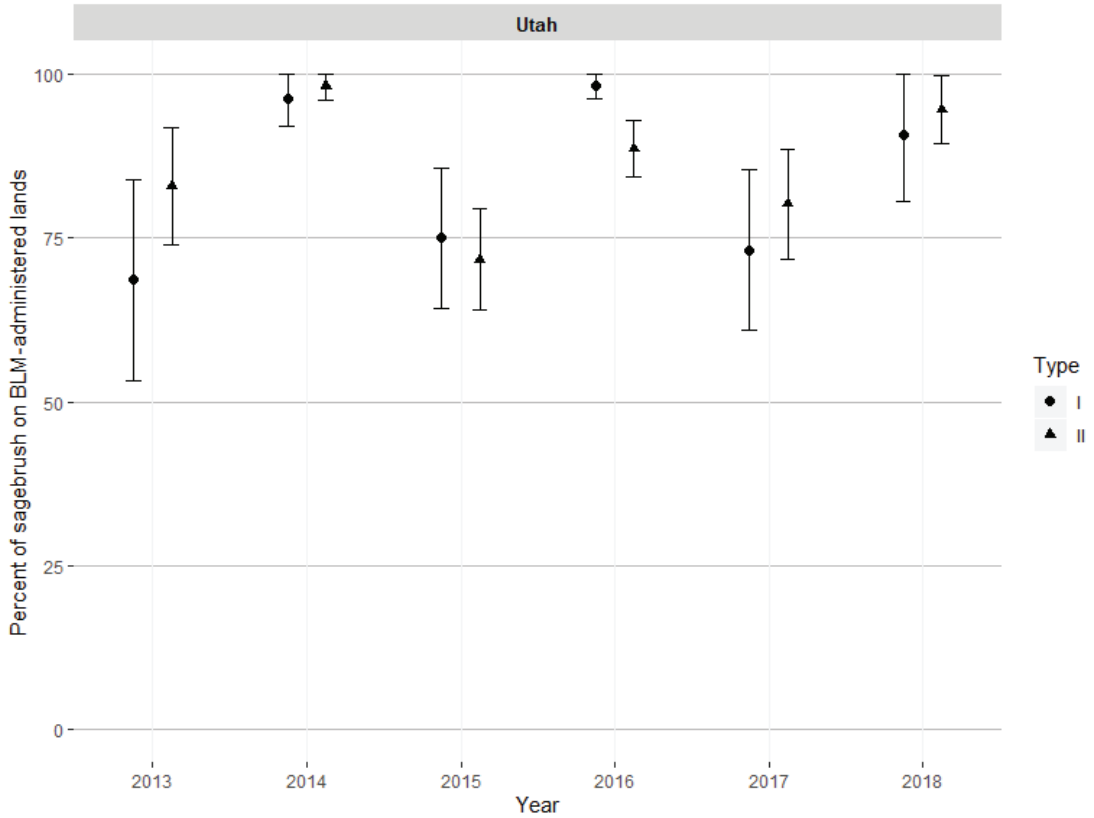



**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM rangelands (80% confidence interval)

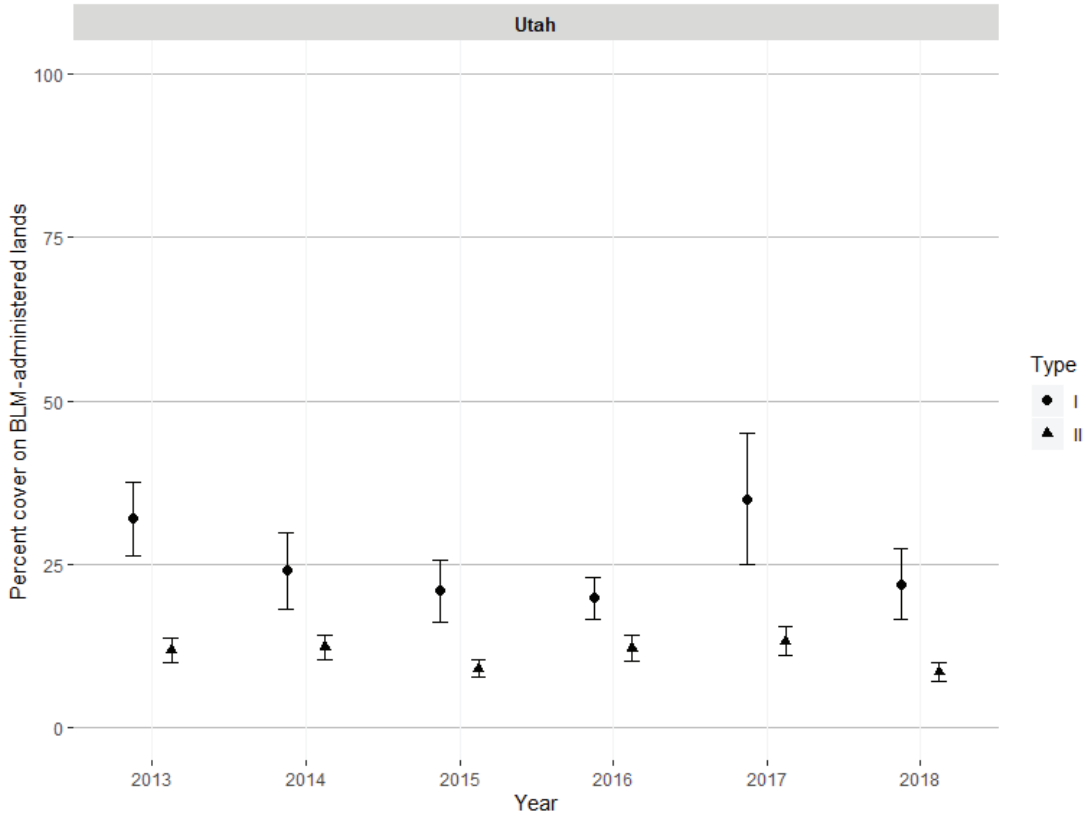



**Figure 6.** Percent cover of perennial grasses and perennial forbs on BLM rangelands (80% confidence interval).

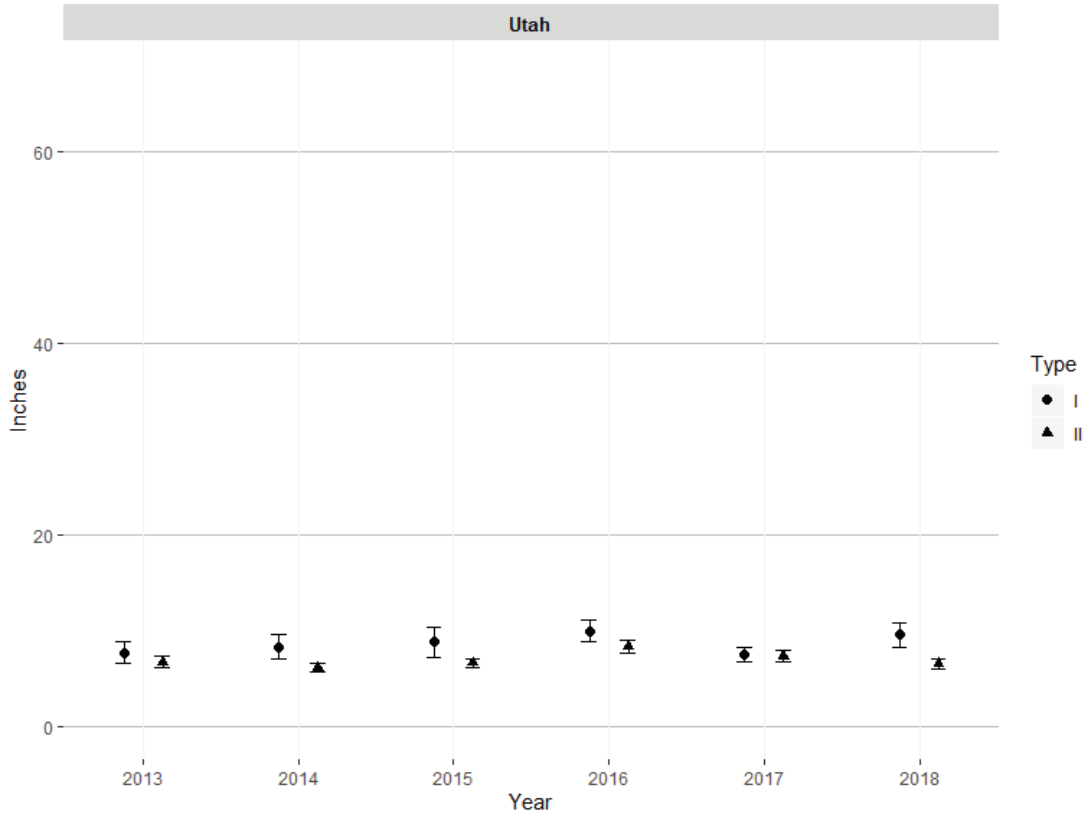



**Figure 7.** Mean herbaceous plant species height in inches on BLM rangelands (80% confidence interval).

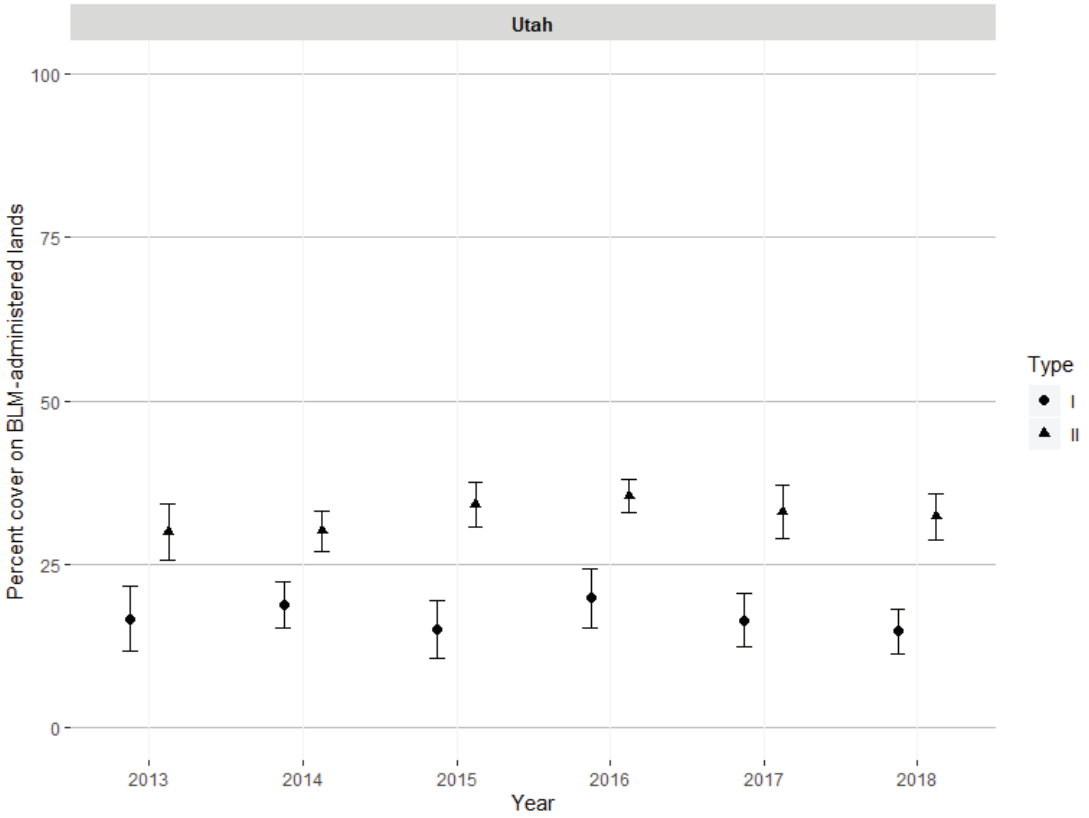



**Figure 8.** Percent cover of bare ground on BLM rangelands (80% confidence interval).

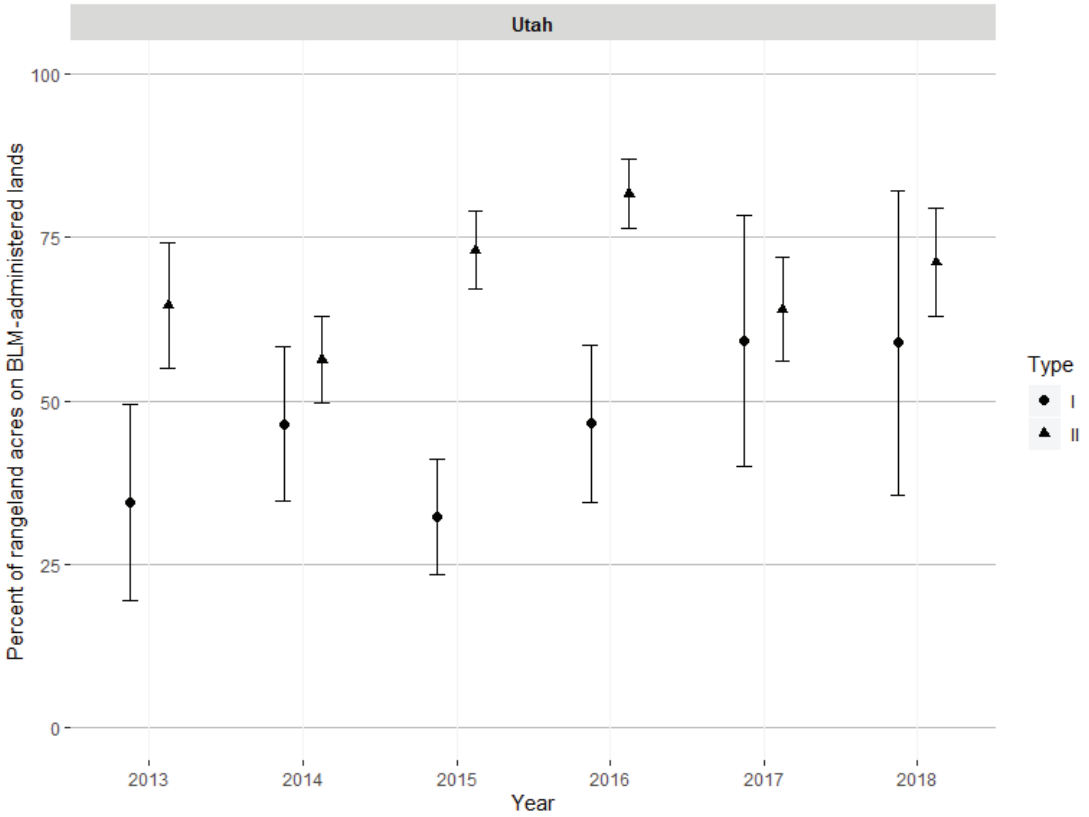



**Figure 9.** Proportion of BLM rangelands with nonnative invasive species present (80% confidence interval).

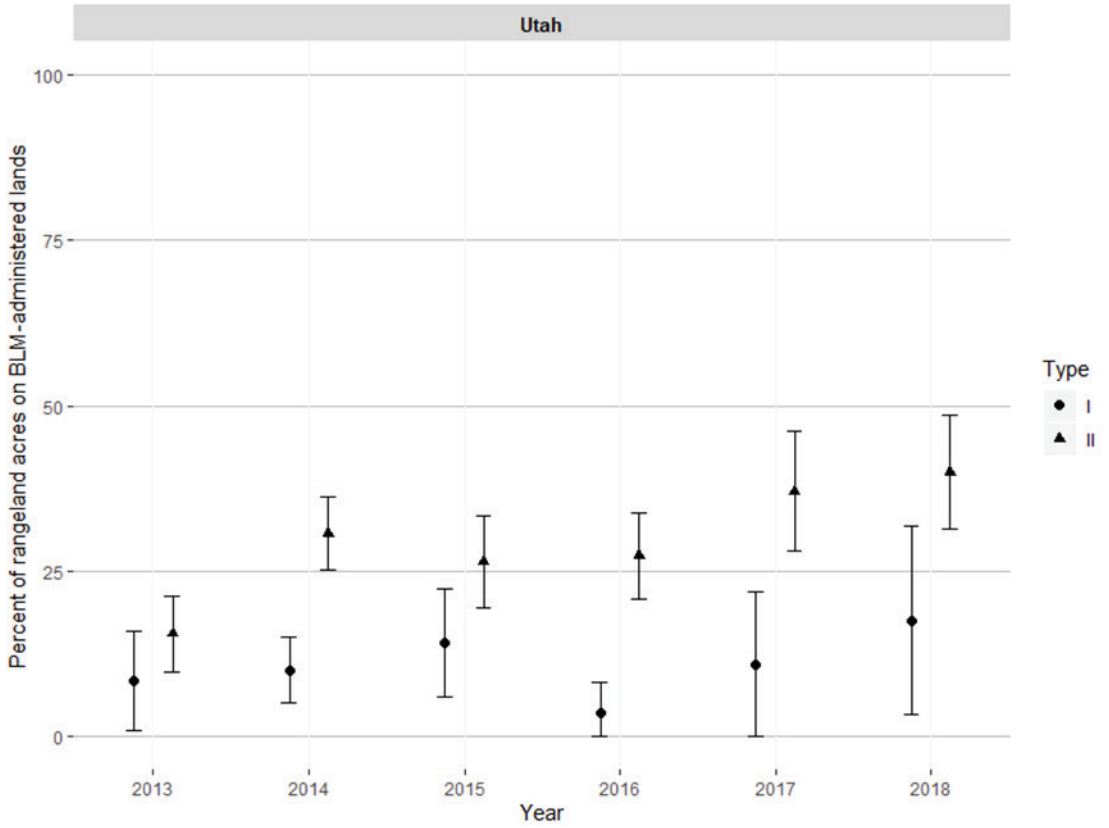



**Figure 10.** Proportion of BLM rangelands where nonnative invasive species are abundant (>= 25% of vegetation cover) (80% confidence interval).

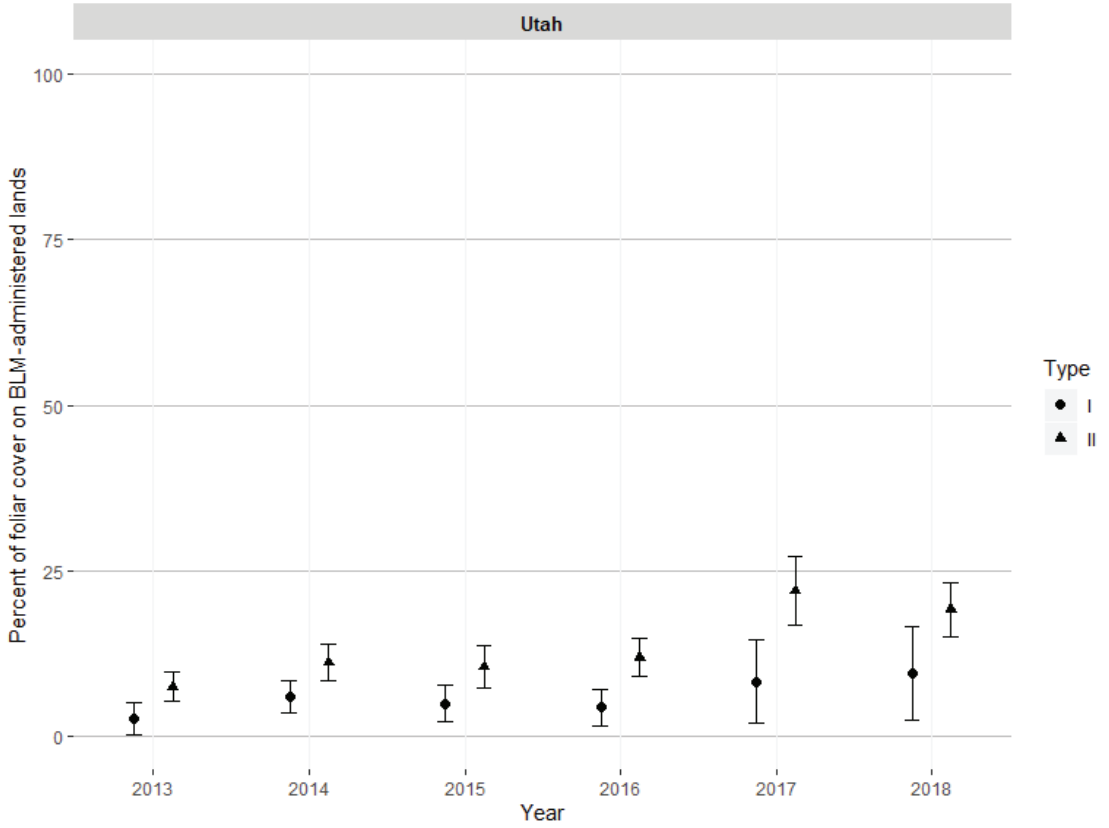



**Figure 11.** Proportion of vegetation composed of annual grasses on BLM rangelands (80% confidence interval).

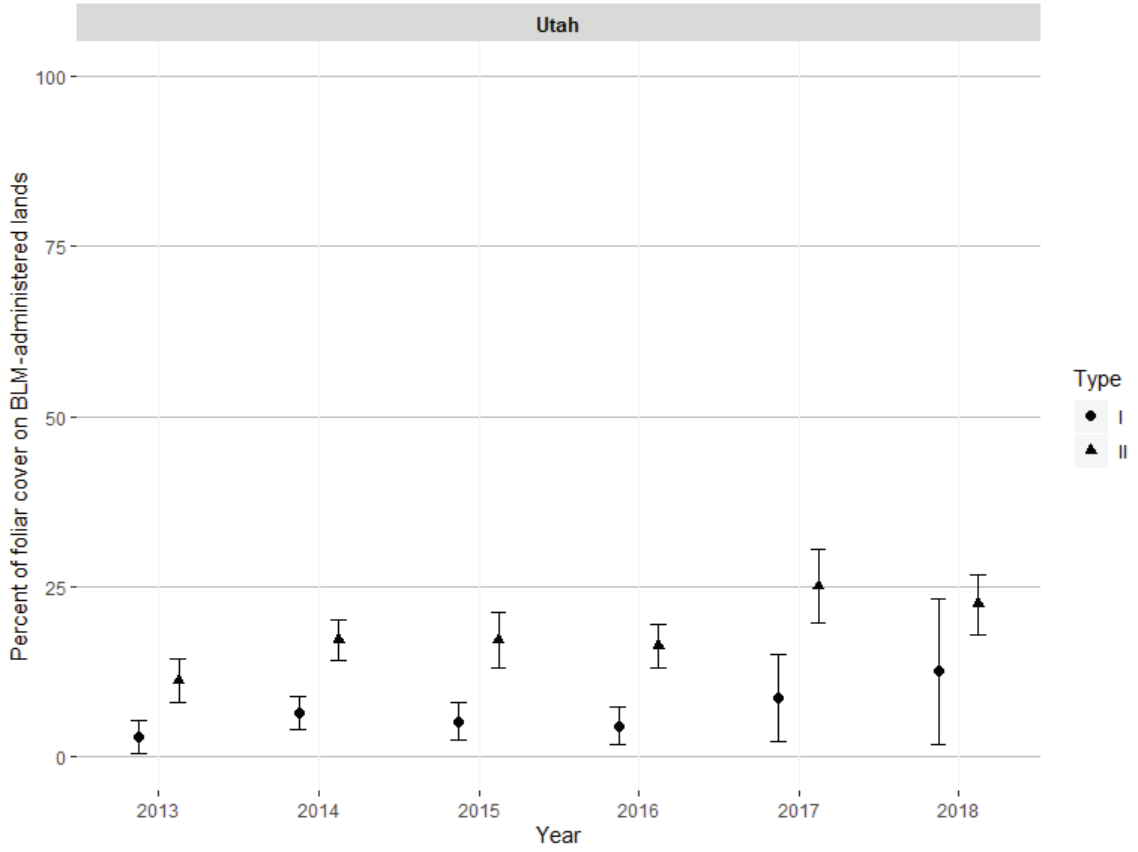



**Figure 12.** Proportion of vegetation composed of nonnative invasive plant species on BLM rangelands (80% confidence interval).

## 1.2. Habitat conditions within seasonal habitat areas

### 1.2.1. Priority Habitat Management Areas

Table 3 is a summary of the Utah BLM habitat objective indicators, and the percentages of monitoring sites meeting or not meeting the benchmark in Priority Habitat Management Areas. Tables 4 and 5 detail Lotic and Lentic areas and their Proper Functioning Condition Status.

**Table 3.** PHMA Habitat Objective Indicators Summary Table

| Utah BLM Habitat Objective Indicators – Summary Table | | | | | | |
|---|---|---|---|---|---|---|
| **Priority Habitat Management Area (PHMA)** | | | | | | |
| **Indicator Description and Benchmark** | **Count and Percentage of Monitoring Sites Meeting Each Classification** | | | | | |
| | **Suitable** | | **Marginal** | | **Unsuitable** | |
| | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| **Sage-Grouse Breeding Habitat (Leks)** | | | | | | |
| Proximity of conifers | 7 | 41.2% | 4 | 23.5% | 6 | 35.3% |
| Proximity of sagebrush to leks | 12 | 70.6% | 5 | 29.4% | 0 | 0.0% |
| **Sage-Grouse Breeding Habitat (Nesting / Early Brood-Rearing)** | | | | | | |
| Percent of seasonal habitat meeting desired conditions[1] | — | — | — | — | — | — |
| Sagebrush cover | 46 | 66.7% | 9 | 13.0% | 14 | 20.3% |
| Total shrub cover | 37 | 53.6% | 11 | 15.9% | 21 | 30.4% |
| Sagebrush Composition | 53 | 81.5% | 4 | 6.2% | 8 | 7.2% |
| Shrub height | 47 | 69.1% | 8 | 11.8% | 13 | 19.1% |
| Perennial grass cover | 61 | 88.4% | 5 | 7.2% | 3 | 4.3% |
| Perennial grass and forb height | 55 | 79.7% | 11 | 15.9% | 3 | 4.3% |
| Perennial forb canopy cover | 38 | 55.1% | 10 | 14.5% | 21 | 30.4% |
| **Sage-Grouse Upland Summer Habitat (Late Brood-Rearing)** | | | | | | |
| Percent of seasonal habitat meeting desired conditions[1] | — | — | — | — | — | — |
| Sagebrush cover | 159 | 67.4% | 26 | 11.0% | 51 | 21.6% |
| Total shrub cover | 177 | 75.0% | 25 | 10.6% | 34 | 14.4% |
| Sagebrush Composition | 147 | 64.8% | 37 | 16.3% | 43 | 18.9% |
| Shrub height | 216 | 93.1% | 10 | 4.3% | 6 | 2.6% |
| Perennial grass cover | 206 | 87.3% | 7 | 3.0% | 23 | 9.7% |
| Perennial forb cover | 153 | 64.8% | 25 | 10.6% | 58 | 24.6% |
| **Sage-Grouse Riparian Summer Habitat (Late Brood-Rearing)** | | | | | | |
| Riparian areas/mesic meadows (PFC) | See tables 2 and 3 for Proper Functioning Condition in PHMA | | | | | |
| Upland and riparian perennial forb availability[2] | 199 | 86.1% | 25 | 10.8% | 7 | 3.0% |
| **Sage-Grouse Winter Habitat** | | | | | | |
| Percent of seasonal habitat meeting desired conditions [1] | — | — | — | — | — | — |
| Sagebrush cover above snow | 316 | 59.4% | 61 | 11.5% | 155 | 29.1% |
| Shrub height | 288 | 56.1% | 30 | 5.8% | 195 | 38.0% |

[1] At this scale with the data that was reviewed it would be inappropriate to designate the % of seasonal habitat meeting desired conditions. This assessment is made at the site-scale within the Habitat Assessment completed for GRSG.

[2] This indicator is meant to assess both riparian and upland forb availability; however, the datasets and the scale assessed did not provide a number for forbs in riparian uplands. Number presented in this table represent only upland form availability.

**Table 4.** Lentic Proper Functioning Condition

| Allotment | Acres of Lentic Sites | Percent Proper Functioning Condition | Percent Functioning At Risk | Percent Not Functioning |
|---|---|---|---|---|
| Big Creek | 17.7 | 99% | 1% | — |
| New Canyon | 9.2 | 99% | 1% | — |
| Sage Creek | 1.7 | 100% | — | — |
| Twin Peaks | 1 | 100% | — | — |
| Stuart | 0 | — | — | — |
| Beaver Creek | 15.7 | 100% | — | — |
| Bealer Basin[1,2] | 1 | — | -— | 100% |
| Hatch Cove[1] | 1 | 100% | — | — |
| West Serviceberry[1,2] | 1 | — | — | 100% |
| Stuntz Valley | 0 | — | — | — |
| **Total** | **47.3** | — | — | — |

[1] The acres for these sites were not present in the LHS assessment. Assumption was made that each site was 1 acre.
[2] These allotments had sites which were not functioning. These sites are likely manmade sites and not functioning due to factors outside of BLM's management control.

**Table 5.** Lotic Proper Functioning Condition

| Allotment | Miles of Lotic Sites | Percent Proper Functioning Condition | Percent Functioning at Risk | Percent Not Functioning |
|---|---|---|---|---|
| Big Creek | 4.4 | 61% | 13% | 26% |
| New Canyon | 8.0 | 35% | 65% | — |
| Sage Creek | 3.3 | — | — | 100% |
| Twin Peaks | 1.2 | 100% | — | — |
| Stuart | 0 | — | — | — |
| Beaver Creek | 0 | — | — | — |
| Bealer Basin | 0 | — | — | — |
| Hatch Cove | 0 | — | — | — |
| West Serviceberry | 0 | — | — | — |
| Stuntz Valley | 0 | — | — | — |
| **Total** | **16.9** | — | — | — |

### 1.2.2. General Habitat Management Areas

Table 6 is a summary of the Utah BLM habitat objective indicators, and the percentages of monitoring sites meeting or not meeting the benchmark in General Habitat Management Areas (GHMA). No Leks or Proper Functioning Condition were assessed in General Habitat as part of a LHS assessment.

**Table 6.** GHMA Habitat Objective Indicators Summary Table

| Utah BLM Habitat Objective Indicators – Summary Table | | | | | | |
|---|---|---|---|---|---|---|
| General Habitat Management Area (GHMA) | | | | | | |
| Indicator Description and Benchmark | Count and Percentage of Monitoring Sites Meeting Each Classification | | | | | |
| | Suitable | | Marginal | | Unsuitable | |
| | Count | Percentage | Count | Percentage | Count | Percentage |
| **Sage-Grouse Breeding Habitat (Leks)** | | | | | | |
| Proximity of conifers | — | — | — | — | — | — |
| Proximity of sagebrush to leks | — | — | — | — | — | — |
| **Sage-Grouse Breeding Habitat (Nesting/Early Brood-Rearing)** | | | | | | |
| Percent of seasonal habitat meeting desired conditions[1] | — | — | — | — | — | — |
| Sagebrush cover | 1 | 33.3 | 0 | 0.0 | 2 | 66.7 |
| Total shrub cover | 0 | 0.0 | 1 | 33.3 | 2 | 66.7 |
| Sagebrush Composition | 2 | 66.7 | 0 | 0.0 | 1 | 33.3 |
| Shrub height | 1 | 33.3 | 0 | 0.0 | 2 | 66.7 |
| Perennial grass cover | 1 | 33.3 | 0 | 0.0 | 2 | 66.7 |
| Perennial grass and forb height | 3 | 100.0 | 0 | 0.0 | 0 | 0.0 |
| Perennial forb canopy cover | 2 | 66.7 | 1 | 33.3 | 0 | 0.0 |
| **Sage-Grouse Upland Summer Habitat (Late Brood-Rearing)** | | | | | | |
| Percent of seasonal habitat meeting desired conditions[1] | — | — | — | — | — | — |
| Sagebrush cover | 5 | 71.4 | 0 | 0.0 | 2 | 28.6 |
| Total shrub cover | 4 | 57.1 | 2 | 28.6 | 1 | 14.3 |
| Sagebrush Composition | 3 | 42.9 | 2 | 28.6 | 2 | 28.6 |
| Shrub height | 5 | 71.4 | 1 | 14.3 | 1 | 14.3 |
| Perennial grass cover | 4 | 57.1 | 0 | 0.0 | 3 | 42.9 |
| Perennial forb cover | 1 | 14.3 | 3 | 42.9 | 3 | 42.9 |
| **Sage-Grouse Riparian Summer Habitat (Late Brood-Rearing)** | | | | | | |
| Riparian areas/mesic meadows (PFC) | No Proper Functioning Condition was assessed in GHMA | | | | | |
| Upland and riparian perennial forb availability[1] | 5 | 71.4 | 2 | 28.6 | 0 | 0.0 |
| **Sage-Grouse Winter Habitat** | | | | | | |
| Percent of seasonal habitat meeting desired conditions[2] | — | — | — | — | — | — |
| Sagebrush cover above snow | 11 | 40.7 | 5 | 18.5 | 11 | 40.7 |
| Shrub height | 14 | 51.9 | 2 | 7.4 | 11 | 40.7 |

[1] This indicator is meant to assess both riparian and upland forb availability; however, the datasets and the scale assessed did not provide a number for forbs in riparian uplands. Number presented in this table represent only upland form availability.

[2] At this scale with the data that was reviewed it would be inappropriate to designate the % of seasonal habitat meeting desired conditions. This assessment is made at the site-scale within the Habitat Assessment completed for GRSG.

1.2.

### 1.3. Habitat conditions – adaptive management habitat triggers

Table 7 shows the year and location of adaptive management triggers met for GRSG habitat.

**Table 7.** Habitat Trigger Summary by Year

| Year | Location of Soft Habitat Triggers Met | Location of Hard Habitat Triggers Met | Causal Factor(s) |
|---|---|---|---|
| **2018** | Box Elder BSU | | NA |
| **2019** | Box Elder, Bald Hills, and Strawberry BSUs | | NA |

All BSUs that met triggers are a result of wildfire in the previous year. The wildfires caused habitat loss in important seasonal habitat at a rate that notified Utah BLM, and its partners in GRSG management, that actions needed to be taken to prevent further declines in habitat loss.

## 2. LHS Evaluations

Of the ten LHS Evaluations completed from 2016 to 2019, five grazing allotments are meeting Utah Standard number three. The five grazing allotments not meeting the standard are located adjacent to each other. The habitat assessment found that the overall area was suitable for sage-grouse habitat at the mid and fine scale. At the site-scale, three of the five grazing allotments were found to have unsuitable brood-rearing/summer habitat because the riparian areas within the allotments were not at PFC with a determination of causal factor being current livestock grazing. A decision has been issued since this determination was made which modifies the grazing management on all five allotments. With respect to the other two grazing allotments, they exceeded the brood-rearing/summer habitat conditions of shrub cover with a determination causal factor being lack of fire. Table 8 shows the allotments, their acres, as well as whether they are meeting standard three or not.

Since some of these allotment evaluations, the habitat objectives for Utah have been refined based on the best available science. This has changed some of the objectives for GRSG. One example of how the objectives were changed is there are no longer upper limits for shrub cover in this habitat type. If the same information was used to evaluate these allotments today, they may be meeting habitat objectives where the current LHS evaluation says they may not be meeting in brood-rearing/summer habitat.

**Table 8.** Allotment Status – Standard Number Three

| Allotment | Acres | Meeting Utah Standard #3 | Not Meeting Utah Standard #3 |
|---|---|---|---|
| Beaver Creek | 2,029 | X | |
| Bealer Basin | 1,890 | X | |
| Hatch Cove | 828 | X | |
| West Serviceberry | 768 | X | |
| Stuntz Valley | 3,279 | X | |
| Big Creek | 21,760 | | X |
| New Canyon | 30,370 | | X |
| Sage Creek | 11,300 | | X |
| Twin Peaks | 2,240 | | X |
| Stuart | 1,040 | | X |
| **Total** | **75,504** | **5** | **5** |

## 3. Surface Disturbance in PHMA

The result of tracking the number of BLM authorizations and acres disturbed per LUP Decision or Program Area disturbance type in total since 2015 are displayed in the following table. The BLM Utah State Office authorized 22 new surface disturbing activities in PHMA resulting in a total of 44.5 additional acres of disturbance. Density and disturbance caps at the project level and BSU scales are in compliance with the LUP.

**Table 9.** Disturbance and Density Summary

| Decision/Program Area | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA | 1 Energy and Mining Facility per 640 acres (density) |
|---|---|---|---|
| Energy (oil and gas wells and development) | — | None | None |
| Energy (coal mines) | None | None | None |
| Energy (wind towers) | None | None | None |
| Energy (solar fields) | None | None | None |
| Energy (geothermal) | None | None | None |
| Mining (active locatable, leasable, and saleable developments) | 12 | 10.6 | Projects are within the density cap |
| Infrastructure (roads) | 7 | 8.5 | NA |
| Infrastructure (railroads) | None | None | NA |
| Infrastructure (power lines) | 1 | 2.3 | NA |
| Infrastructure (communication towers) | None | None | NA |
| Infrastructure (other vertical structures) | None | None | NA |
| Other developed rights-of-way | 3 | 23.2 | NA |
| Coalbed Methane Ponds | None | None | NA |
| Meteorological Towers | None | None | NA |
| Nuclear Energy Facilities | None | None | NA |
| Airport Facilities and Infrastructure | None | None | NA |
| Military Range Facilities & Infrastructure | None | None | NA |
| Hydroelectric Plants | None | None | NA |
| Recreation Areas Facilities and Infrastructure | None | None | NA |
| **TOTALS** | **23** | **44.5** | |

## 4. GRSG Population Trends – Adaptive Management Population Triggers

Table 10 shows a population trigger summary by year.

The Sheeprocks BSU met the soft and hard population trigger in 2016 because of several years of population decline. Since that time Utah BLM has worked in coordination with the Utah DWR and other partners to

improve habitat in that area as well as translocations of birds from other populations in the state to increase population numbers. Counts have increased since these efforts have started.

The Parker Mountain BSU met a soft trigger for population in 2019. The winter of 2018-2019 had above average snowpack that persisted later than normal into the spring. The persistent snowpack severely restricted human access to lekking locations, limiting the ability of personnel counting leks to reach lekking locations. As a result of limited access, many leks did not receive the minimum required number of visits during the protocol lekking period. Fewer visits reduce the probability of observing peak counts on each lek. Snow covering traditional lek sites during the lekking period can reduce the proportion of male greater sage-grouse attending leks and shift peak attendance to later in the year, outside of protocol dates. The combination of a high proportion of lek sites being inaccessible for all or a portion of the counting period and a lower portion of the Utah greater sage-grouse population attending leks resulted in a low bias in the results of the 2019 greater sage-grouse lek counts. In 2020 a concerted effort was made to conduct lek count monitoring within the BSU to capture the population. In addition, local field offices are engaging in habitat improvement work to increase available habitat to birds in this BSU.

**Table 10.** Population Trigger Summary by Year

| Year | Location of Soft Population Triggers Met | Location of Hard Population Triggers Met | Causal Factor(s) |
|---|---|---|---|
| **2016** | Sheeprocks BSU | Sheeprocks BSU | Final Draft in Progress |
| **2019** | Parker Mountain BSU | | NA |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available data as described above. The rangewide datasets used do not directly answer the question as written in the Monitoring Framework. However, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of GRSG.

This appendix, rather than an assessment of effectiveness of the conservation measures in the 2015 GRSG LUPs provides some trend information but is primarily a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for GRSG.

1. Are the plans meeting the sage-grouse habitat objectives?

   Utah BLM has answered this Monitoring Framework question by presenting a summary of data that informs each indicator from the LUP Habitat Objectives by seasonal habitat type. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the habitat objective indicators may not be manageable by the BLM nor are they achievable on every acre (e.g., due to ecological site potential) of designated sage-grouse Habitat Management Areas across the landscape that BLM manages. The indicators do, however, provide a suite of habitat characteristics that helps inform the BLM when developing and implementing management decisions and projects within GRSG habitat.

For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. A mosaic of vegetation communities and ecological sites occurs across the range of sage-grouse and spatial data used to delineate habitats (seasonal and/or HMAs) cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs. BLM policy directs the field to use all data collected for these habitat indicators when assessing suitability of sage-grouse habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) inform land health evaluations and NEPA analyses in an authorization process.

***Nesting and Early Brood-Rearing Seasonal Habitat***

Within PHMA and GHMA for nesting and early brood-rearing habitat, 33.3% and 66.7% of plots respectively, are not within the desired value for sagebrush cover with 32.3% of plots not meeting sagebrush height. These monitoring locations could have either low ecological site potential for sagebrush cover, or the measured sagebrush cover values could be slightly above or below the desired condition. These aspects will be further analyzed within HAF summary reports.

For both PHMA and GHMA, perennial grass cover, and perennial grass and forb height within nesting and brood-rearing habitat are meeting the desired conditions for the majority of locations. Although 44.9% of PHMA and 33.3% of GHMA plots are not meeting the desired condition for perennial forb cover, perennial grass and forb height is meeting at 79.7% of all locations. Also, perennial grass cover is meeting on over 86.1% of the total locations monitored.

In addition, 5 of the 7 indicators within nesting and early brood-rearing habitat in PHMA are meeting at greater than 65% of plots (i.e., shrub height, perennial grass cover, perennial grass and forb height, sagebrush composition and sagebrush cover) which suggests these are likely not limiting factors. The trend of the remaining indicators, which are less than 56% (total shrub cover and perennial forb cover) need to be monitored more closely to determine trend and whether these indicators are making progress toward meeting the desired conditions across PHMA.

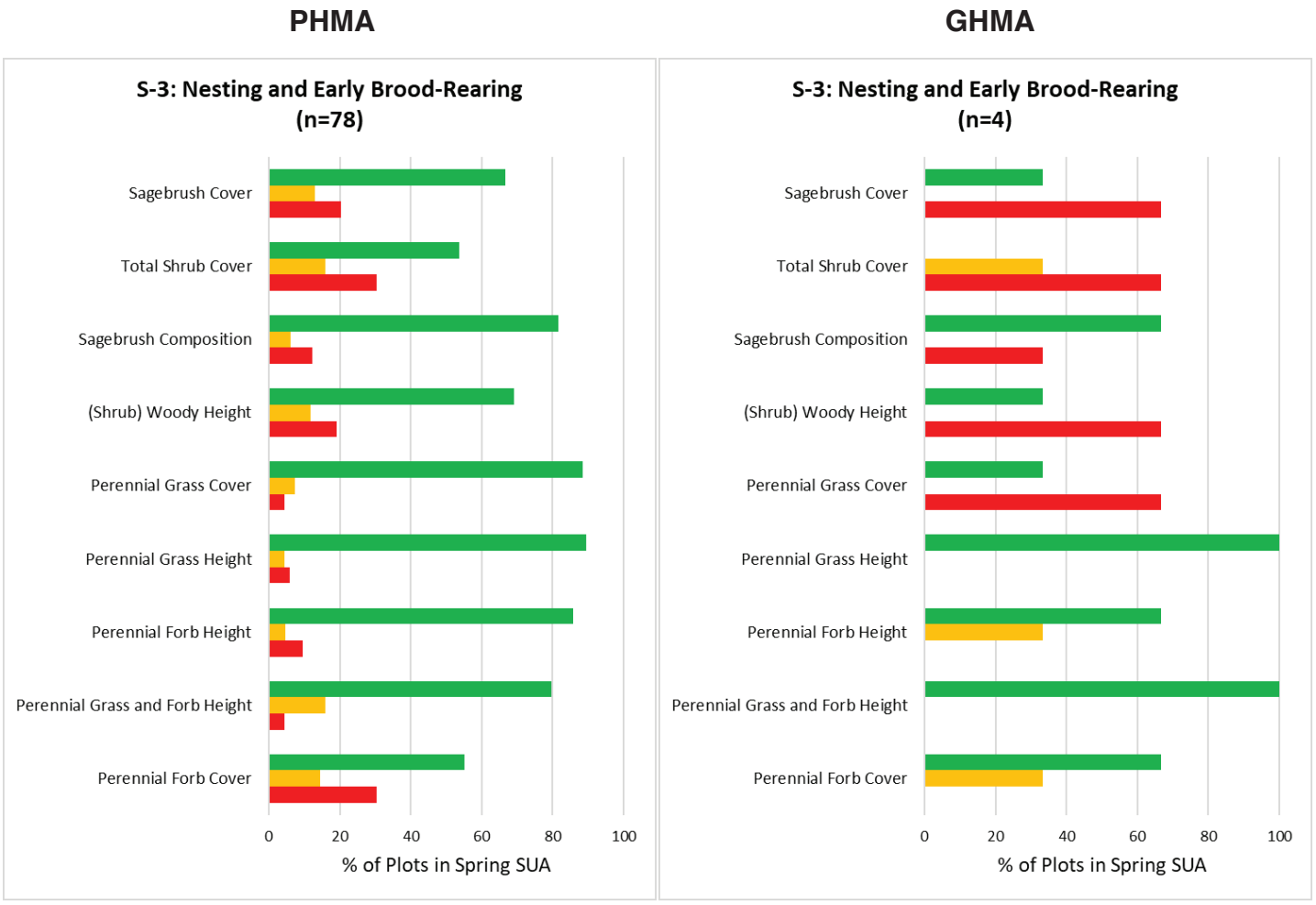



**Figure 13.** Nesting and early brood-rearing seasonal habitat within PHMA and GHMA meeting desired conditions.

***Late Brood-Rearing and Summer Seasonal Habitat***

Within PHMA and GHMA for late brood-rearing/summer habitat, 33.6% and 28.6% of plots respectively, are not within the desired value for sagebrush cover. However, 93.1% (PHMA) and 33.3% (GHMA) of plots, are within the desired condition for shrub height. Within PHMA and GHMA the perennial grass and forb cover is meeting for 76% and 35.7% of plots, respectively. Perennial forb availability within PHMA and GHMA is meeting for the majority of locations with nearly 86.1% and 71.4%, respectively, of sampled plots achieving this desired condition.

In addition, 4 of the 7 indicators within late brood-rearing/summer habitat in PHMA are meeting at greater than 75% of plots (i.e., shrub height, total shrub cover, both perennial grass and forb cover, and perennial forb availability), which suggests these are likely not limiting factors. In fact, 86.1% of plots in PHMA are meeting the forb availability indicator with ≥ 6 or more forb species. Sagebrush cover in PHMA is meeting at 67.4% of the plots, with 71.4% of the plots in GHMA meeting. The trend of the remaining indicators, which are less than 68% (sagebrush cover, sagebrush composition and perennial forb cover) need to be monitored more closely to determine trend and whether these indicators are making progress toward meeting the desired conditions across PHMA.

In PHMA 47.3 acres of lentic habitat was assessed, of that 45.9 acres were at proper functioning condition, 1 acre was functioning at risk, and 2 acres were nonfunctional. A total of 16.9 miles of lotic areas was assessed. 6.7 miles were proper functioning condition, 5.8 miles were functioning at risk and 4.4 miles were

nonfunctional. Lotic areas that were functioning at risk and nonfunctional were due to livestock grazing and a decision was implemented in these areas to help make progress toward meeting standards.

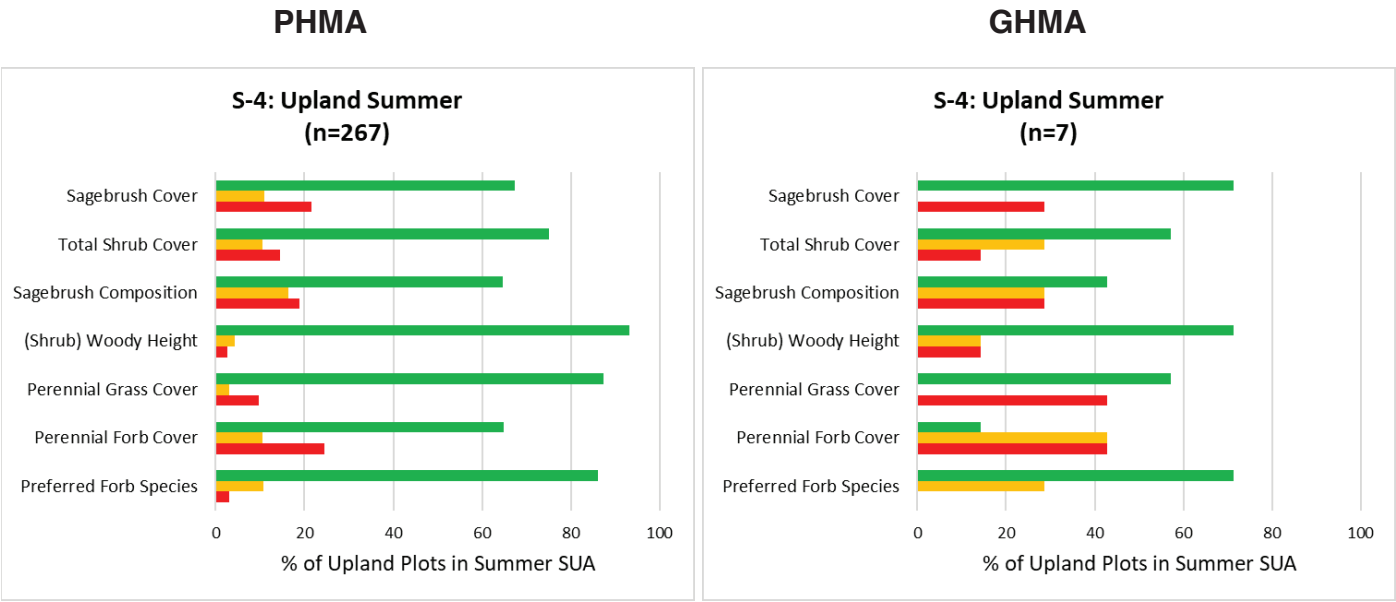



**Figure 14.** Late brood-rearing summer seasonal habitat within PHMA and GHMA meeting desired conditions.

***Winter Seasonal Habitat***

Within PHMA and GHMA for winter habitat, 40.6% and 59.2% of plots respectively, are not within the desired value for sagebrush cover. However, 59.4% (PHMA) and 51.9% (GHMA) of plots, are within the desired condition for shrub height. It should be noted that winter climatic features change on a daily basis given variable snowfall levels and movement of snow by wind. The movement of snow can create deep snow drifts, which may bury some sagebrush but expose other sagebrush to below expected average snow depths. For example, GRSG have been documented using black sagebrush, a very short statured species, on hillsides and slopes during the winter months. The use of these areas is likely correlated to snow movement along these windswept ridges. The winter habitat indicators should therefore be interpreted with caution based on the data limitations and variable climatic factors. Weather patterns are also highly variable across these monitoring locations and therefore some years may provide sagebrush that is fully accessible to GRSG during the winter months.

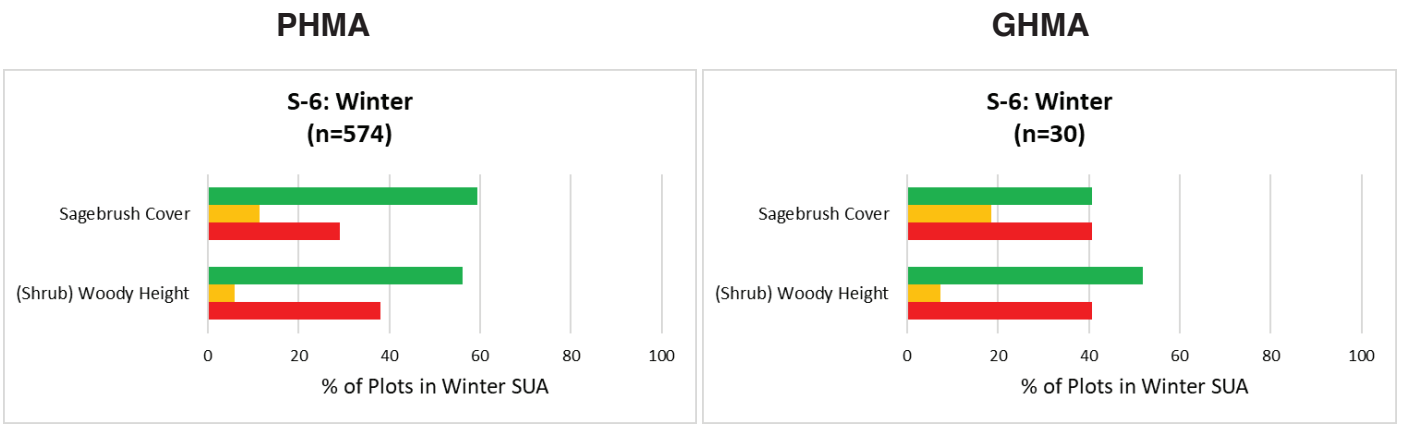



**Figure 15.** Winter seasonal habitat within PHMA and GHMA meeting desired conditions.

***Seasonal Habitat Discussion***

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/or are not a manageable component of the plant community. In some cases, past management history, drought etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within seasonal habitats or habitat management areas (HMA) may fall on these inclusions of nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results from the data for each habitat objectives do not represent the landscape as a whole. Rather, the results are solely based on the percentage of monitoring plots across the seasonal habitats/HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential.

***Overall Range Habitat Conditions***

Summaries of 11 indicators relevant to sage-grouse habitat were derived from BLM Landscape Monitoring Framework (LMF) data collected between 2013 and 2018 within and outside sage-grouse habitat. These summaries are weighted estimates representing the area sampled. General trends can be determined from these summaries. Sagebrush cover and height within sage-grouse habitat, although it has fluctuated, appears to be slightly increasing between 2013 and 2018. Sagebrush shape appears to be moving from less columnar to more spreading within sage-grouse habitat. Grass and forb cover appear to be slightly decreasing, while grass and forb height appear to be slightly increasing between 2013 and 2018. Cover of bare ground between 2013 -2016 appeared to be increasing but since 2016 has seen a slight decrease to 2018. In addition, there were less nonnative invasive species within sage grouse habitat than outside habitat, but the amount of nonnative invasive species was slowing increasing within sage grouse habitat. These changes in indicators over time have not been confirmed as statistically significant nor have the factors as to why these apparent changes have occurred. These will be analyzed as part of habitat assessments and land health evaluations moving forward.

2. Are sage-grouse HMAs within the LUP area meeting, or making progress towards meeting, LHS, including the Special Status Species/wildlife habitat standard?

Ten grazing allotments have had LHS evaluations completed on them since implementation of the LUP. Five grazing allotments were meeting standard three, which relates specifically to sage-grouse and their habitat. Five grazing allotments were not meeting the standard, but actions were implemented to make significant progress toward meeting the standard. 75,504 acres of GRSG habitat on Utah BLM-managed lands are

compliant with this standard. Utah BLM is making progress toward meeting LHS for GRSG by evaluating land health and making changes, as needed, to improve rangeland health in GRSG habitat.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   Utah BLM has documented 22 projects that account for 44.2 acres of disturbance in GRSG habitat. The amount of disturbance within the planning area has remained under the density and disturbance caps at the project level scales and is compliant with the LUP. Disturbance at the BSU scale discussed in the BLM Rangewide GRSG Report.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The data presented in the results section indicate that since 2015, 2 BSUs have met hard and/or soft population triggers. Since the Sheeprocks BSU met a hard and soft trigger in 2016, no additional triggers have been met due to translocation efforts. These efforts make it hard to know for sure what is happening with population numbers. However, this area has been a high priority for Utah BLM and our partners. Rehabilitation efforts are planned to continue in the area.

   The Parker Mountain BSU met a soft trigger in 2019 and will continue to be watched closely. To prevent this population from meeting a hard trigger Utah BLM is implementing habitat improvement projects to make more habitat available for the bird, as well as continuing efforts to participate in lek counts each spring.

   The remaining BSUs are stable with regular increases and decreases in populations as a cause of natural population cycles.

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# Greater Sage-Grouse Plan Implementation

## Appendix 14: Wyoming State Office Monitoring Report for the 2015 Wyoming Land Use Plan Amendments and Revisions

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# Appendix 14: Wyoming State Office Monitoring Report

# Greater Sage-Grouse Plan Implementation

## Appendix 14: Wyoming State Office Monitoring Report for the 2015 Wyoming Land Use Plan Amendments and Revisions

## 2015–2020


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# Introduction

This BLM Wyoming State Office Monitoring Report is an appendix to the BLM Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (BLM Rangewide GRSG Report). This appendix describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures from land use plan amendments and revisions in Wyoming: the Lander RMP Revision of 2014 and all others covered by the 2015 RMP Revisions (Bighorn and Buffalo) and the GRSG Approved Resource Plan Amendment Records of Decision (RODs). The BLM Rangewide GRSG Report contains the results of the BLM's 2015 planning-wide monitoring efforts for GRSG conservation using datasets and methods identified in the BLM and USFS GRSG Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG Plan Amendments and Revisions covered by the RODs.

The structure for the BLM Rangewide GRSG Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework evaluating the BLM's National Planning Strategy (5 questions) and the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revisions (4 questions). This appendix summarizes implementation data and information specific to the Buffalo RMP Revision, Cody RMP Revision, Lander RMP Revision, Worland RMP Revision, and the Wyoming GRSG Management RMP Amendments within Wyoming and answers the following four questions:

1. Are the plans meeting the sage-grouse habitat objectives?
2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard?
3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

# Methods

The BLM Wyoming State Office monitored four factors (one factor per monitoring question) in LUP-designated GRSG habitat management areas within six amendments' and four revisions' planning areas in Wyoming:

- Habitat conditions, as articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)
- Land Health Standards evaluations
- Surface disturbance in PHMA GRSG population trends (in coordination with the state wildlife agency).

BLM Wyoming used the following methods for the four factors.

# 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

## 1.1. Habitat conditions statewide

Summaries of 11 indicators of importance to sage-grouse rangewide were generated within GRSG habitat (type I) and outside of GRSG habitat (type II) on BLM lands in Wyoming. These indicators are generally recognized as important components of GRSG habitat quality (e.g., sagebrush cover) or potential threats to habitat quality (e.g., invasive species), and many are also called out in the LUP Habitat Objectives Tables. These indicators provide consistent contextual information about habitat conditions broadly within the state and are presented in all appendices to the Rangewide report. These summaries are weighted estimates representing the area sampled (type I and type II BLM lands) for each indicator. These estimates are derived from BLM Landscape Monitoring Framework (LMF) data, the national component of terrestrial Assessment, Inventory, and Monitoring (AIM). The field protocol for all terrestrial AIM data is the Monitoring Manual for Grassland, Shrubland and Savannah Ecosystems (Herrick et al. 2017 – **https://www.landscapetoolbox.org/wp-content/uploads/2016/02/MMGSSE_20170614.pdf**). More information about LMF is available in the 2011 BLM Rangeland Resource Assessment (**http://aim.landscapetoolbox.org/wp-content/uploads/2015/12/Final-BLM-2011-Rangeland-Resource-Assessment_September-2016.pdf**).

## 1.2. Habitat conditions within seasonal habitats

In addition, summaries of LMF and field-office collected AIM data were generated to evaluate how frequently quantitative habitat objectives, as detailed in each LUP Habitat Objectives Table, were met within seasonal habitats within Habitat Management Areas. If no seasonal habitats are delineated in the LUP area, the sampling date was used to group plots in Habitat Management Areas, so each summary for that area reflects the timeframes associated with each seasonal use period identified in the Habitat Objectives Table. These summaries provide the number of plots meeting and not meeting the habitat objectives for each indicator. They are not weighted to represent to the overall area sampled.

## 1.3. Habitat conditions – adaptive management habitat triggers

The method used annually to determine whether soft or hard habitat triggers had been tripped used the following methodology as described in the LUP:

> Wyoming LUP adaptive management triggers can be tripped by notable habitat and/or population declines that would prompt a management action. Data sets that are evaluated in Wyoming include the Density Disturbance Calculation Tool (DDCT), Fire Perimeter and history (FPERS), Wyoming Game and Fish Department (WGFD) male lek attendance data, and state-wide wing bee summaries. Calculations for these data sets are compiled and performed at the Biologically Significant Unit (BSU) scale, known as Core Areas in Wyoming.
>
> FPERS wildfire data is combined with DDCT (documented anthropogenic disturbances) to calculate the total fragmentation of sage-grouse habitat per BSU. The change is calculated on the present year's disturbance as a relative percentage against the previous year's disturbance level in the same BSU (A-B/A x 100). If this amount is $\geq$ 5% (WY LUP all lands approach), then an independent habitat trigger has been identified and would normally be indicated as a soft trigger if this happened over the course of 1 year. However, if the amount is $\geq$ 40%, this information can be used on a 3-year average to inform a hard trigger threshold being met if the problem persists or is combined with

other metrics (population declines). Similarly, if the amount is ≥ 60% a hard trigger threshold has been met.

*Note that these methods apply specifically to BLM Wyoming planning areas whereas the Rangewide GRSG Monitoring Report contains the BLM annual 2015 planning strategy-wide estimates of sagebrush availability at the **Biologically Significant Unit** (BSU) scale.*

## 2. Land Health Standards (LHS) Evaluations

Summarized data for allotments that contain any sage-grouse habitat in the planning area was used to address this factor. This data is summarized annually (since 2015) in each BLM state office and aggregated from information collected for the annual BLM Rangeland Inventory, Monitoring, and Evaluation (RIME) Report. The data is presented in two categories:

### 2.1. BLM acres of Category A allotments that contain SG habitat

All LHS are achieved or significant progress toward achieving is being made.

### 2.2. BLM acres of Category B allotments that contain SG habitat

These are not achieving all LHS, grazing was identified as the causal factor, and was changed to make progress towards achieving LHS.

## 3. Surface Disturbance in PHMA

The methods used to track the number of BLM-authorized surface disturbing actions in GRSG PHMA within the planning areas and to calculate the amount of disturbance associated with each proposal prior to authorization are:

Wyoming has employed the Density and Disturbance Calculation Tool (DDCT) for surface disturbance tracking and cap compliance. BLM Wyoming has used this system, developed in conjunction with our state partners, since 2013. This tool provides the means to screen proposed projects for cap compliance, analyze existing disturbance trends, and populate a statewide disturbance database, from which we have been able to populate the rangewide SDARTT tool to support national level analyses. Wyoming also leverages existing authorization tracking systems (such as LR2000 case recordation, ePlanning, and the Automated Fluid Mineral Support System (AFMSS) database) to inform BLM authorization tracking across our state.

*Note that the methods previously described apply at the project scale. The Rangewide GRSG Monitoring Report contains the annual BLM estimate of the amount of anthropogenic disturbance at a larger scale (BSU) using datasets described in the Monitoring Framework.*

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

Calculation of the annual determination of whether either soft or hard population triggers had been tripped used the following LUP-defined methodology:

> Population trends are the responsibility of the WGFD, and the BLM does not announce these triggers without concurrence from our state partners. However, the BLM does make population calculations independently of the state using the same data sets to ensure the safety net of adaptive management. Average lek attendance is calculated per BSU and then calculated at a relative percentage of the current year attendance against the same leks the year before to arrive at the change in population, similar to habitat calculations. It should be noted that these numbers are calculated regardless of number of leks observed, or if no males attended particular leks that year. The hunter harvest wing counts are used as forecasting or supplemental information to help inform demographic information into the equation of average male lek attendance. Much of this data is subjective and imprecise but offers a consistent collection method to measure population change. Soft triggers are identified when "populations are outside a normal range of variability" each year. It is not uncommon to have populations increase or decline more than 20% in a given year, with peaks and troughs occurring approximately every 10 years in Wyoming. The BLM focuses on areas that have experienced a steep annual population decline or appears to be at a historic low, leaving remaining grouse vulnerable to a stochastic event. Hard triggers use the same 40% (3-year trend) or 60% decline threshold. These, of course, can be identified in conjunction with the habitat metrics to identify a hard trigger.

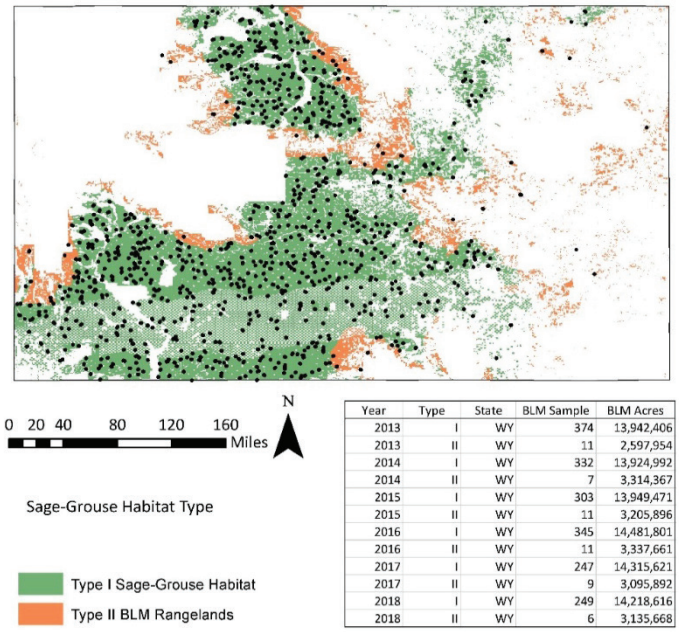
# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance in PHMA, and sage-grouse population trends.

## 1. Habitat Conditions, as Articulated in the Habitat Objectives Table(s) and Adaptive Management Habitat Trigger(s)

### 1.1. Habitat conditions statewide from LMF data analyses

#### 1.1.1. Wyoming Plot Locations Used to Derive Statewide Estimates




| Year | Type | State | BLM Sample | BLM Acres |
|---|---|---|---|---|
| 2013 | I | WY | 374 | 13,942,406 |
| 2013 | II | WY | 11 | 2,597,954 |
| 2014 | I | WY | 332 | 13,924,992 |
| 2014 | II | WY | 7 | 3,314,367 |
| 2015 | I | WY | 303 | 13,949,471 |
| 2015 | II | WY | 11 | 3,205,896 |
| 2016 | I | WY | 345 | 14,481,801 |
| 2016 | II | WY | 11 | 3,337,661 |
| 2017 | I | WY | 247 | 14,315,621 |
| 2017 | II | WY | 9 | 3,095,892 |
| 2018 | I | WY | 249 | 14,218,616 |
| 2018 | II | WY | 6 | 3,135,668 |

**Figure 1.** Wyoming habitat conditions for type I (BLM lands within sage-grouse habitat) and type II (BLM rangelands outside of sage-grouse habitat) and summary table of number of BLM sample points and BLM acres.

Additional indicators that will be provided for habitat (type I) and nonhabitat (type II) within the state: percent foliar cover of sagebrush; percent foliar cover of perennial grasses and forbs; mean sagebrush height (inches); mean herbaceous plant height (inches); percent of sagebrush cover that is columnar in sagebrush shape; percent of sagebrush cover that is spreading in sagebrush shape; percent of areas with invasive plant species present; percent foliar cover of annual grasses; percent cover of bare ground.

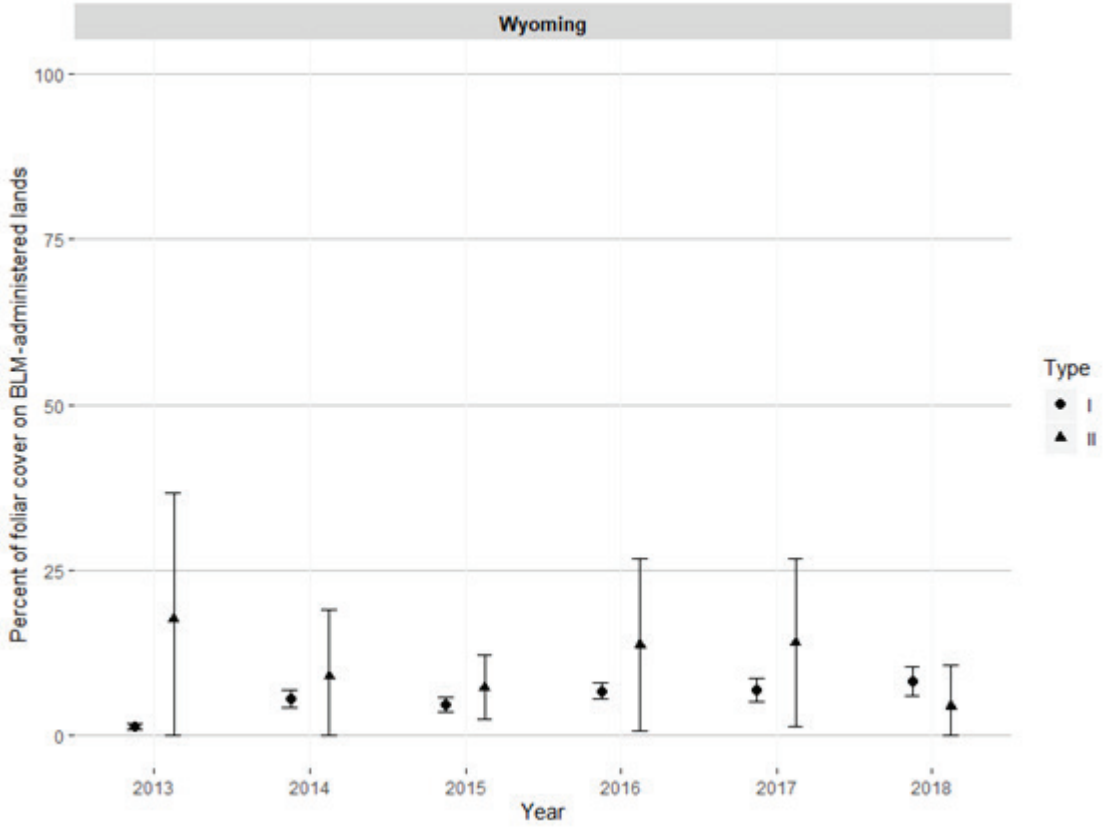



**Figure 2.** Percent cover of sagebrush on BLM rangelands.

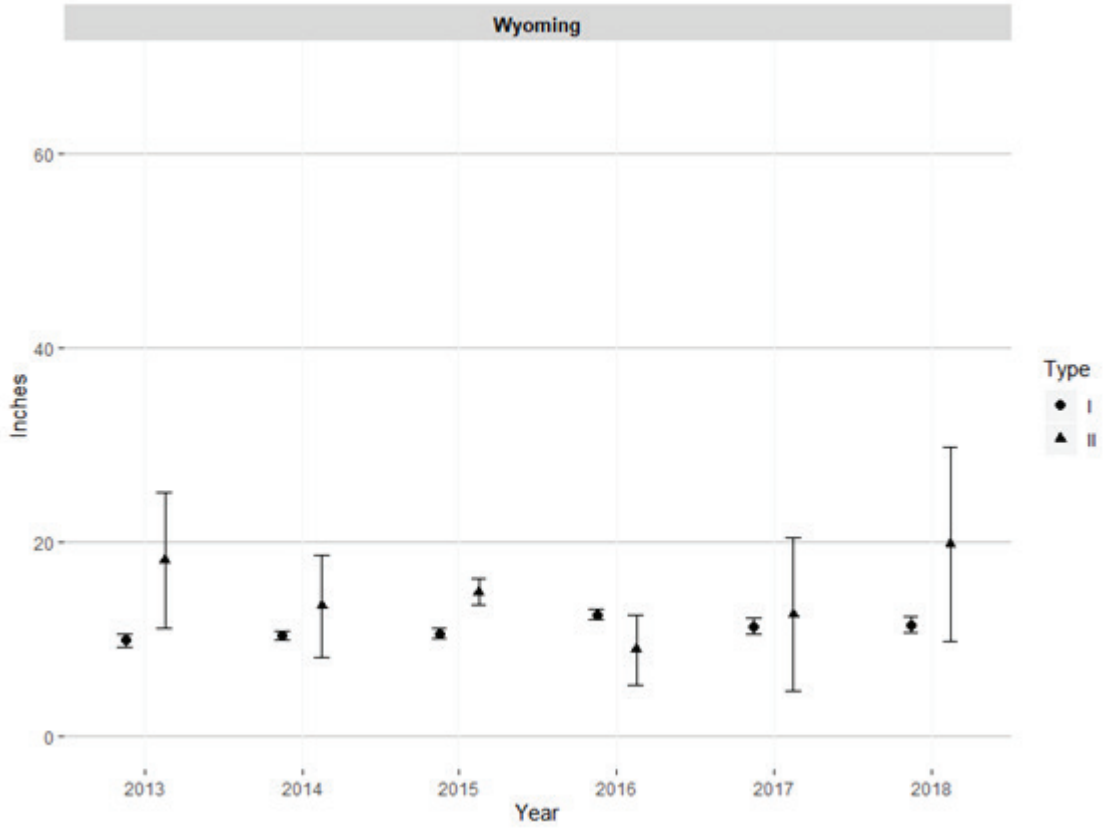



**Figure 3.** Mean sagebrush species height in inches on BLM rangelands.

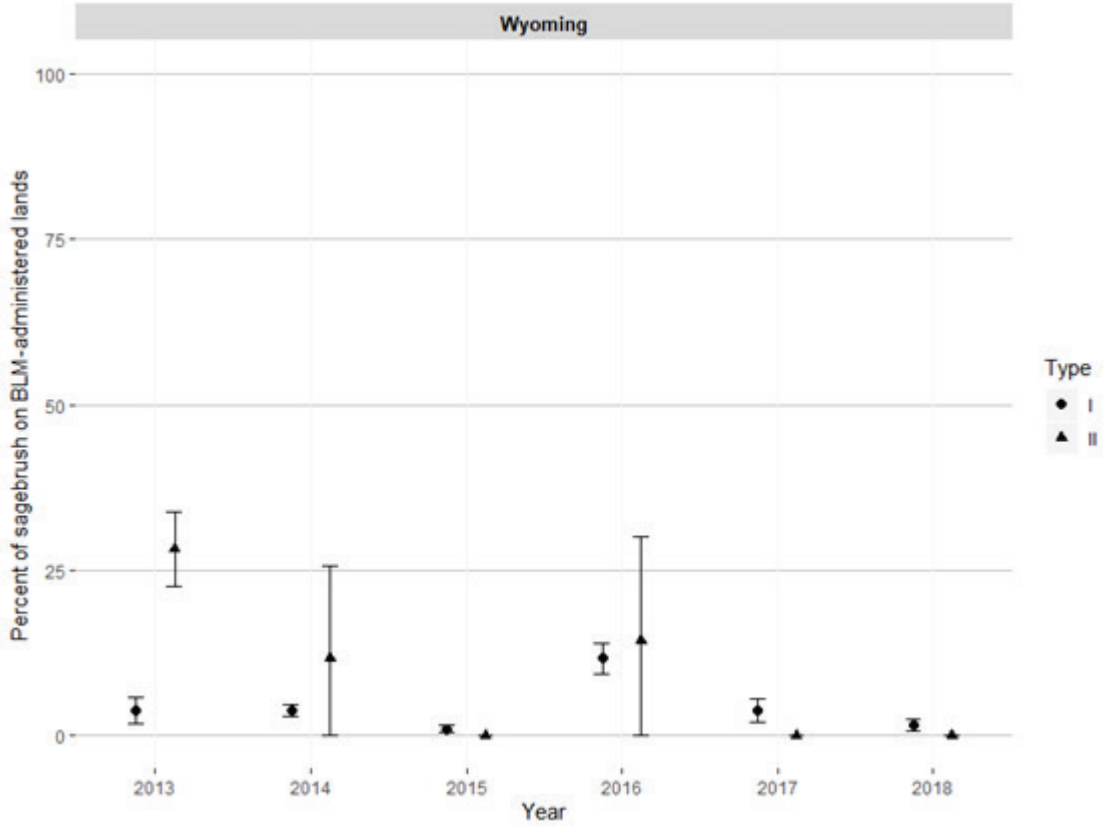



**Figure 4.** Proportion of sagebrush that is columnar shaped on BLM rangelands.

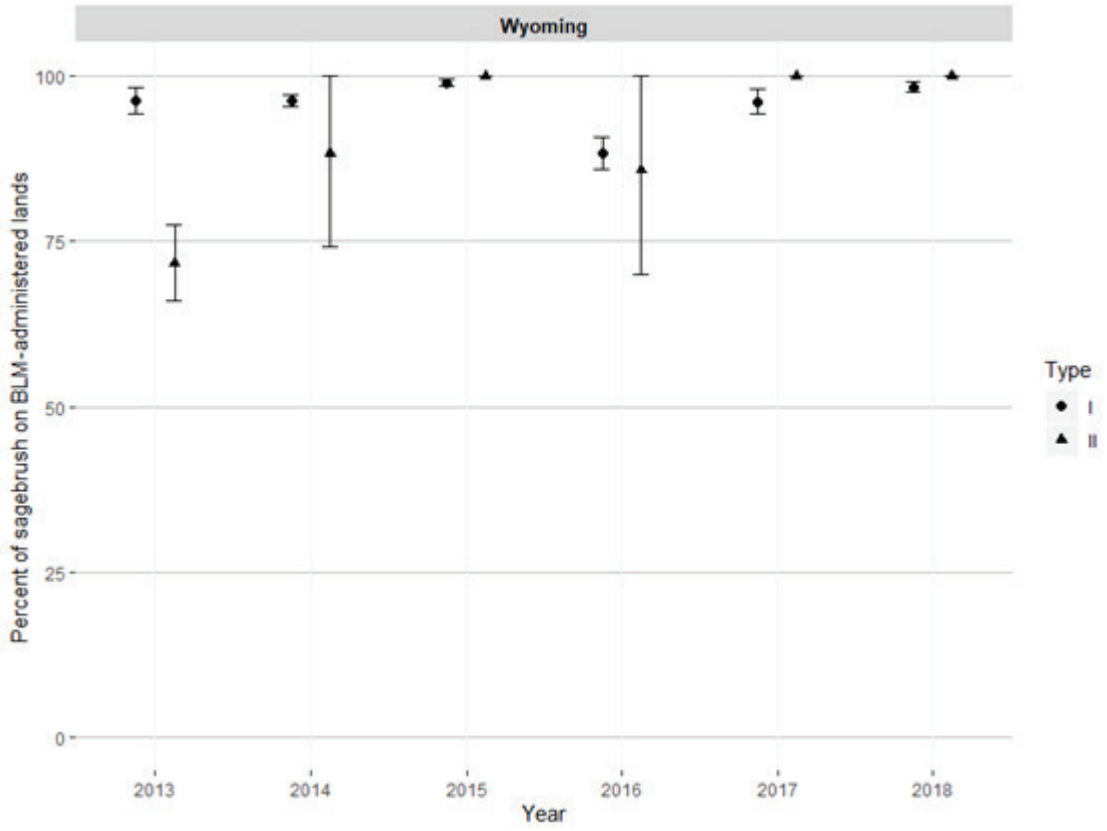



**Figure 5.** Proportion of sagebrush that is spreading shaped on BLM rangelands.

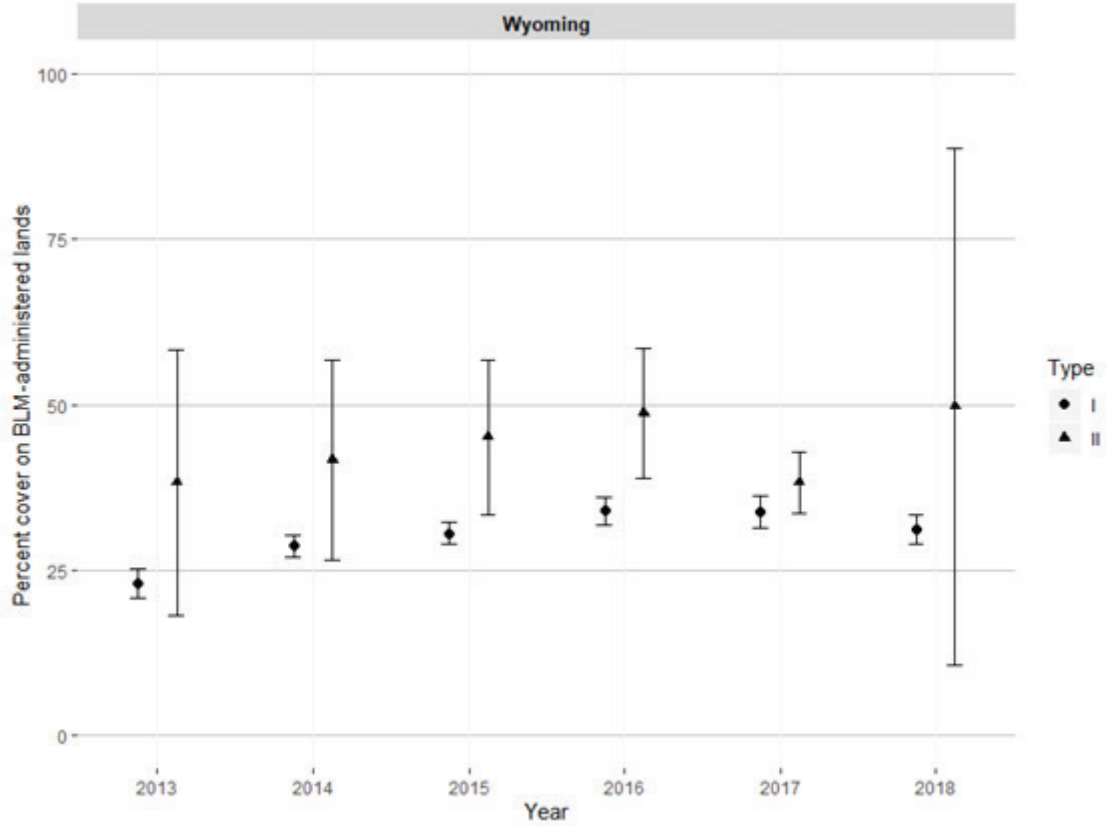



**Figure 6.** Percent cover of perennial grasses and perennial forbs.

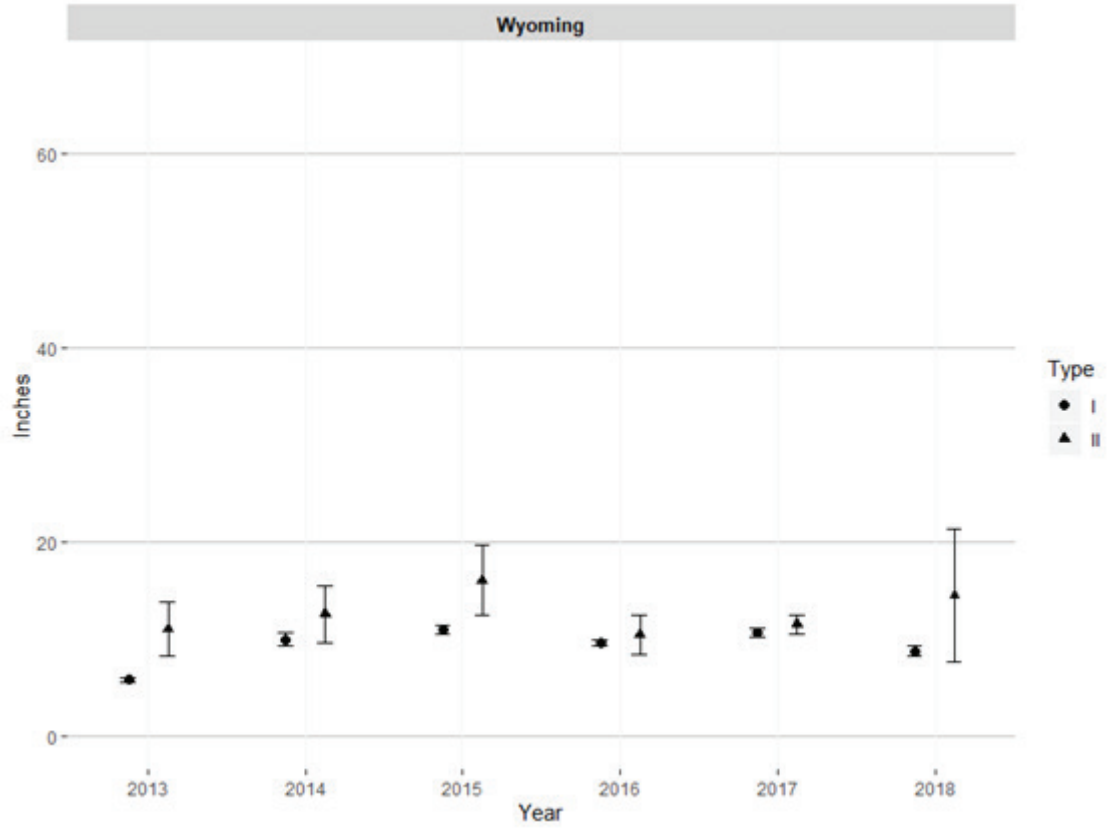



**Figure 7.** Mean herbaceous plant species height in inches on BLM.

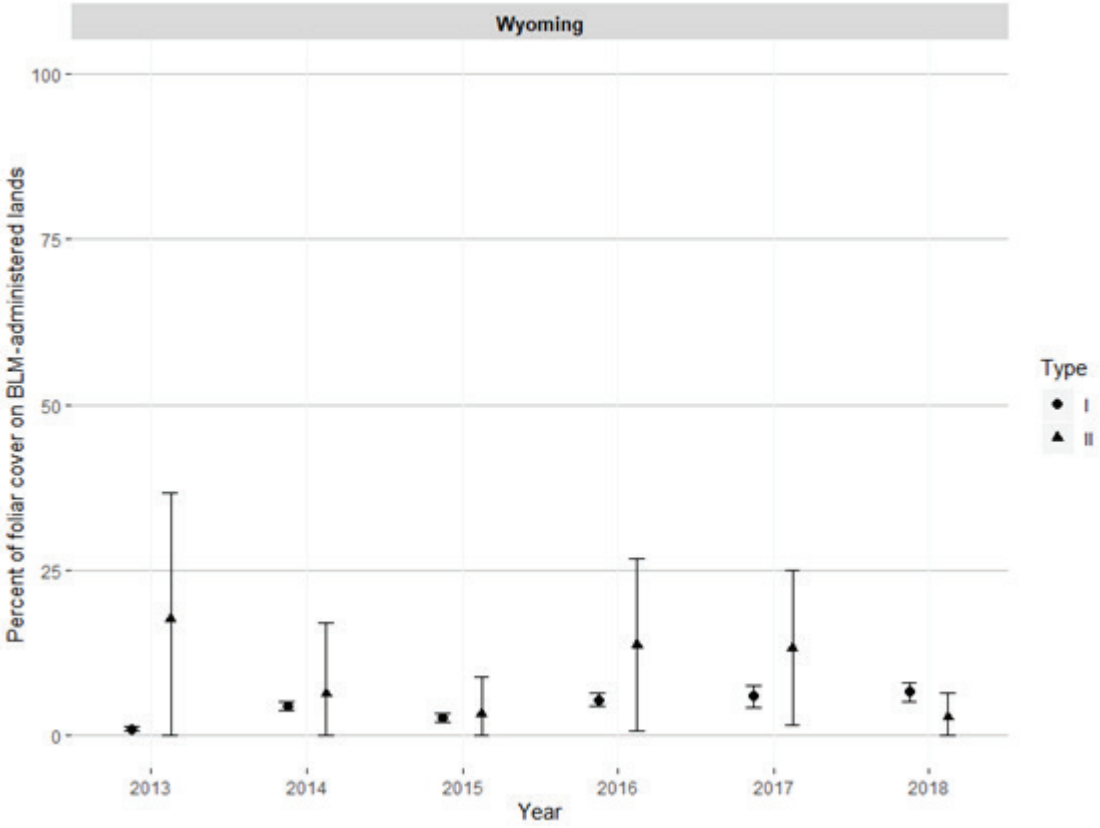



**Figure 8.** Proportion of BLM rangelands with nonnative invasive species present.

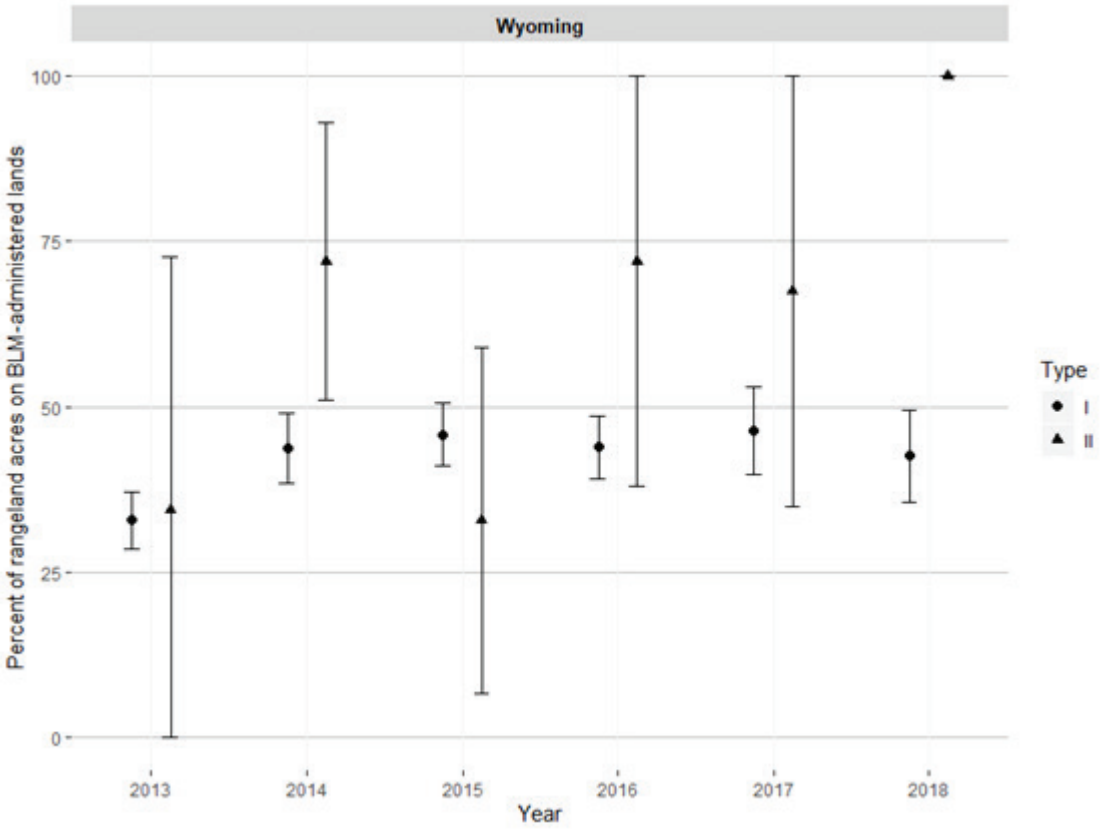



**Figure 9.** Proportion of BLM rangelands where > 25% of foliar cover is comprised of nonnative invasive species.

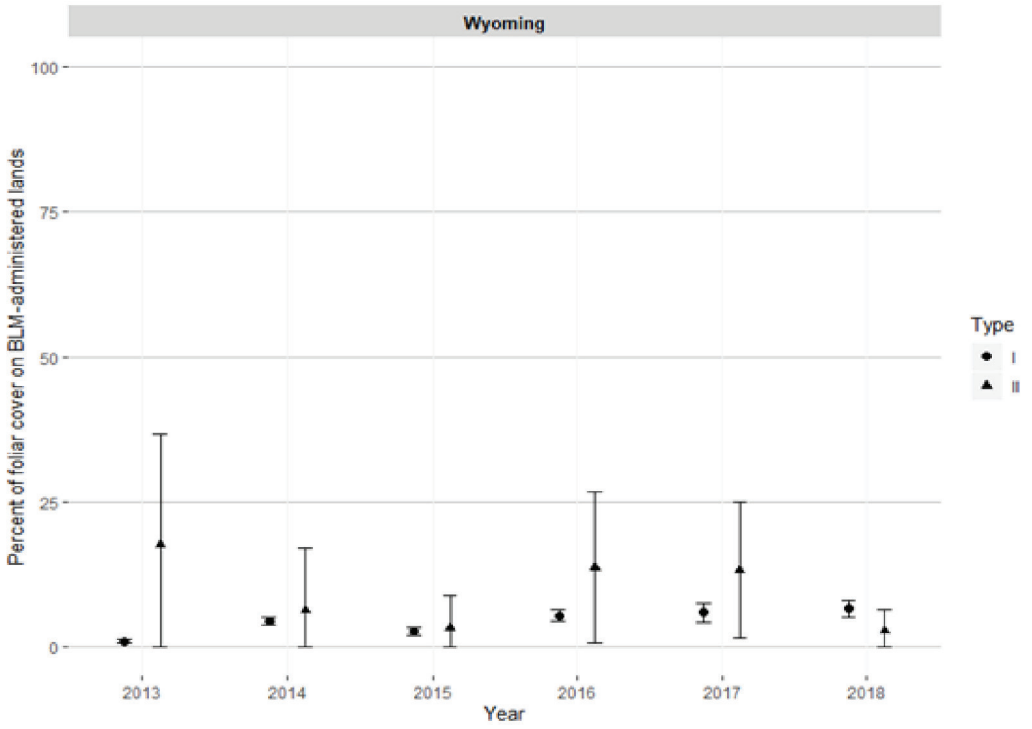



**Figure 10.** Proportion of vegetation composed of annual grasses on BLM rangelands.

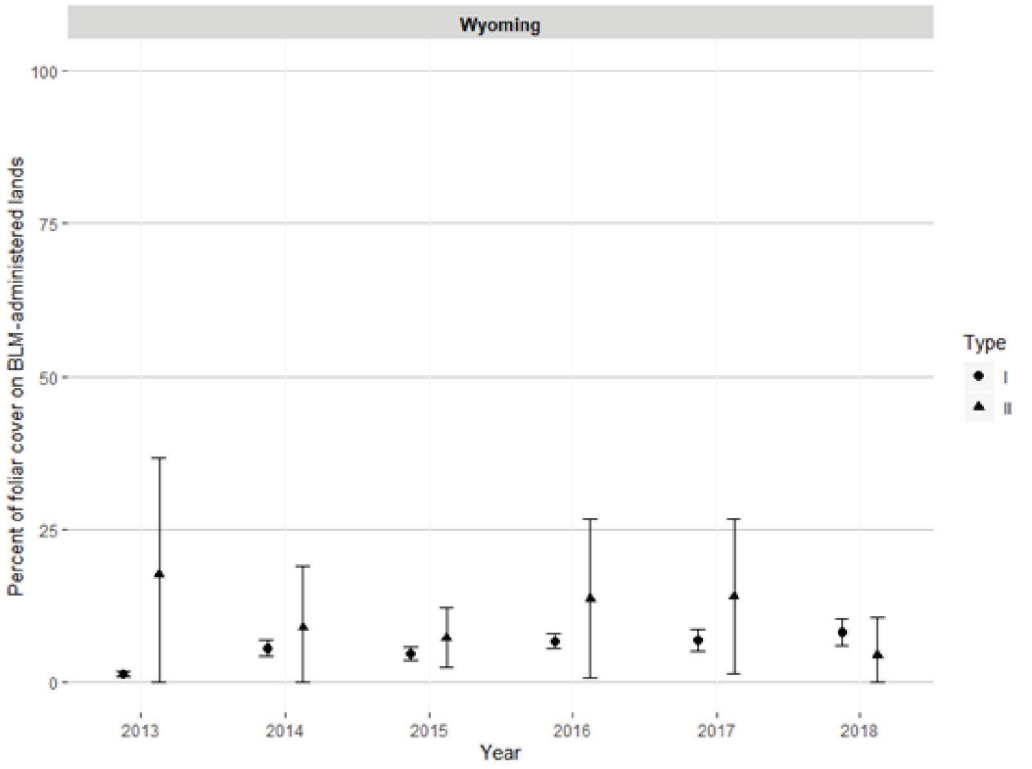



**Figure 11.** Proportion of vegetation composed of nonnative invasive plant species on BLM.

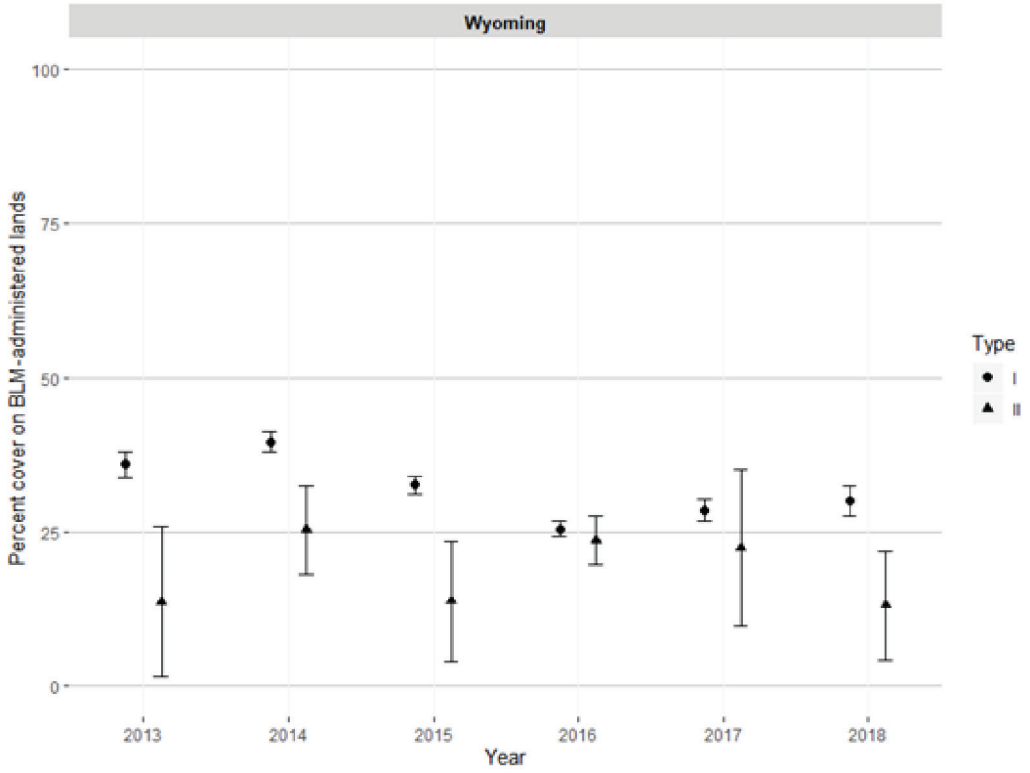



**Figure 12.** Percent cover of bare ground on BLM rangelands.

## 1.2. Habitat conditions within seasonal habitat areas

The summaries below reflect data collected within sage-grouse habitat in Wyoming Resource Management Plan Revisions and GRSG Approved Resource Management Plan Amendments between 2013 through 2019. The summaries count and categorize monitoring locations as meeting, not meeting, or data not collected, for each of the quantifiable indicators found in the Habitat Objectives tables of each of the Wyoming Resource Management Plan Revisions and GRSG Approved Resource Management Plan Amendments. The indicator values shown in the Habitat Objectives Table (table 2-2) describe the desired conditions across the broad landscape based on best available science at the time of publication of the Wyoming Resource Management Plan Revisions and GRSG Approved Resource Management Plan Amendments regarding GRSG habitat use.

Collectively, the vegetation indicators for sagebrush (cover, height, and shape), perennial grasses, perennial forbs (cover, height, and/or availability), and others found in the Habitat Objectives Tables represent the vegetation components associated with each seasonal habitat area. Not all locations within a given seasonal habitat area will be able to achieve the indicator values in the Habitat Objectives Tables due to the inherent variation in vegetation communities and ecological site potential as well as environmental factors such as drought or fire. Monitoring locations where one or more objectives are not met may or may not be providing suitable sage-grouse seasonal habitat; these summaries do not include an interpretation of the site-scale metrics which collectively inform habitat suitability. Habitat suitability is appropriately evaluated through the processes outlined in the Sage-Grouse Habitat Assessment Framework and supplemental training materials developed by the BLM. These include guidance on the interpretation of these data (i.e., indicator values) and other information collected within GRSG habitat. Finally, the data aggregated for this summary represent many different sample designs with various sample intensities and monitoring objectives; thus, they may not reliably represent conditions in all locations.

### 1.2.1. Wyoming Habitat Objectives Summary Table

**Table 1.** Summary of Wyoming Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Nesting / Early Brood-Rearing | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5% - 25% | 235 | 69 | 106 | 31 | 0 | 0 | 341 | 100 |
| Perennial Grass Cover | >10% -15% | 292 | 86 | 49 | 14 | 0 | 0 | 341 | 100 |
| Perennial Forb Cover | ≥5% - 10% | 66 | 19 | 275 | 81 | 0 | 0 | 341 | 100 |
| Sagebrush Height | 4 – 32 in (10 – 80 cm) | 93 | 27 | 242 | 72 | 2 | 1 | 341 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | >7 in (18 cm) | 252 | 74 | 20 | 6 | 68 | 20 | 341 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5-25% | 159 | 54 | 133 | 46 | 0 | 0 | 292 | 100 |
| Perennial Grass Cover | >10%-15% | 193 | 66 | 99 | 34 | 0 | 0 | 292 | 100 |
| Perennial Forb Cover | ≥5% -10% | 32 | 11 | 260 | 89 | 0 | 0 | 292 | 100 |
| Sagebrush Height | 4 -32 in (10-80 cm) | 124 | 43 | 138 | 47 | 30 | 10 | 292 | 100 |
| Perennial Grass (and forb) Height (includes residual grasses) | >7 in (18 cm) | 234 | 80 | 27 | 9 | 31 | 11 | 292 | 100 |

**Table 1** *(continued)*. Summary of Wyoming Habitat Objectives by Seasonal Use Areas and Habitat Management Areas

| Late Brood-Rearing/Summer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** |
| Sagebrush Cover | 5-25% | 840 | 68 | 399 | 32 | 0 | 0 | 1249 | 100 |
| Sagebrush Height | 4-32 in (10-80 cm) | 796 | 64 | 429 | 34 | 24 | 2 | 1249 | 100 |
| Perennial Grass and Forb cover | ≥10% | 1152 | 92 | 97 | 8 | 0 | 0 | 1249 | 100 |
| Preferred Forb Species | Common ≥4 in composition | 478 | 38 | 768 | 62 | 0 | 0 | 1249 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | 5-25% | 643 | 60 | 429 | 40 | 0 | 0 | 1072 | 100 |
| Sagebrush Height | 4-32 in (10-80 cm) | 831 | 78 | 174 | 16 | 67 | 6 | 1072 | 100 |
| Perennial Grass and Forb cover | ≥10% | 874 | 82 | 198 | 18 | 0 | 0 | 1072 | 100 |
| Preferred Forb species | Common ≥4 in composition | 377 | 35 | 694 | 65 | 0 | 0 | 1072 | 100 |

| Winter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PHMA** | | | | | | | | | |
| **Indicator Description** | **Desired Condition[1]** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Measured[2]** | | **Totals** | |
| | | **Count** | **%** | **Count** | **%** | **Count** | **%** | **Count** | **%** |
| Sagebrush Cover | >5% | 1344 | 86 | 216 | 14 | 0 | 0 | 1560 | 100 |
| Sagebrush Height | >10 in (25 cm) above snow | 759 | 49 | 801 | 51 | 0 | 0 | 1560 | 100 |
| **GHMA** | | | | | | | | | |
| Sagebrush Cover | >5% | 984 | 74 | 346 | 26 | 0 | 0 | 1331 | 100 |
| Sagebrush Height | >10 in (25 cm) above snow | 711 | 53 | 614 | 46 | 10 | 1 | 1331 | 100 |

[1] Desired condition represents the combined range of values for arid and mesic sites found in WY habitat objectives tables.

[2] Indicator not monitored on a plot may be due to protocol (e.g., no sagebrush height because it was not a required field) or may be due to the fact that the species/life form was absent or present in very low abundance (e.g., no sagebrush height because sagebrush was sparse enough that it was never encountered where heights were measured).

### 1.3. Habitat conditions – adaptive management habitat triggers

**Table 2.** Habitat Trigger Summary

| Year | Number and Location of Soft Habitat Triggers Tripped | Number and Location of Hard Habitat Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | None | None | N/A |
| **2016** | None | None | N/A |
| **2017** | One habitat soft trigger in Buffalo Connectivity | None | Wildfire |
| **2018** | One habitat soft trigger in Bear River BSU | None | Wildfire |
| **2019** | None | None | N/A |

## 2. Land Health Standards Evaluations

### 2.1. Category A

These rangelands are meeting all standards or making significant progress toward meeting the standard.

**Table 3.** Summary of Category A Allotments

| State – Year – Category | Number of Assessed Allotments | BLM Acres in Assessed Allotment |
|---|---|---|
| WY - 2015 – Category A Rangelands | 30 | 50,463 |
| WY - 2016 – Category A Rangelands | 4 | 2,360 |
| WY - 2017 - Category A Rangelands | 43 | 49,526 |
| WY – 2018 – Category A Rangelands | 158 | 98,113 |

### 2.2. Category B

These rangelands are not meeting all standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (livestock is a significant factor).

**Table 4.** Summary of Category B Allotments

| State - Year – Category | Number of Assessed Allotments | BLM Acres in Assessed Allotments |
|---|---|---|
| WY - 2015 - Category B Rangelands | 5 | 51,452 |
| WY - 2016 - Category B Rangelands | 0 | 0 |
| WY - 2017 - Category B Rangelands | 4 | 14,280 |
| WY - 2018 - Category B Rangelands | 3 | 21,997 |

## 3. Surface Disturbance in PHMA

The result of tracking the number of BLM authorizations and acres disturbed per LUP Decision or Program Area disturbance type in total since 2015 are displayed in the following table. Wyoming State Office authorized 367 surface disturbing activities in PHMA resulting in a total of 13,172 acres of disturbance in compliance with the land use plan disturbance cap.

**Table 5.** Disturbance Summary

| Decision/Program Area | | Count of Authorizations in PHMA | Total Acres of Authorizations in PHMA |
|---|---|---|---|
| Coal Leasing | | 0 | 0 |
| Fluid Mineral Leasing (O&G) | | 137* | 639 |
| Geothermal Energy | | 0 | 0 |
| Locatable Minerals | | 8% | 2506 |
| Nonenergy Leasable Minerals | | 3+ | 36 |
| Rights-of-Way | | 99 | 4,201 |
| Salable - Mineral Materials Disposals | | 34 | 293 |
| Solar Energy | | 0 | 0 |
| Trails & Travel Management | | 1# | 54 |
| Utility Corridors | | 0 | 0 |
| Wind Energy | | 0 | 0 |
| Other^ | Chemical Treatments | 53 | 3,824 |
| | Prescribed Burns | 26 | 882 |
| | Mechanical Treatments | 6 | 737 |
| TOTALS | | 367 | 13,172 |

**Notes**

* - These authorizations apply specifically to approved permits to drill (APDs) for oil & gas wells on federal mineral estate. These data were gathered from the BLM Automated Fluid Mineral Support System (AFMSS).

% - This count of authorizations pertains specifically to approved plans of operation for locatable mineral development, such as uranium, bentonite, gold, and other locatable minerals.

+ - Nonenergy leasable authorizations in this table are leases only; the acreage corresponds to the acres of surface disturbance caused by mineral development as documented in the Density and Disturbance Calculation Tool (DDCT).

# - The BLM has not approved any travel management plans in Wyoming since September 2015. However, the BLM did approve a plan for a nonmotorized trail system within PHMA in the Lander Field Office in 2016-17 (Johnny Behind the Rocks Recreation Area). This plan calls for new trails to be established in PHMA resulting in 54 acres of disturbance. It may be more appropriate to classify these as "other" authorizations, as they were approved under a recreation plan, rather than a travel management plan.

^ - Other approved BLM authorizations that have resulted in habitat disturbance include vegetation treatments and prescribed burns. Many of these treatments have been performed to improve sagebrush habitat (i.e., conifer removal), so determining which authorizations removed habitat vs those which have improved habitat will require thorough analysis. This will require pulling data from additional fire and treatment data systems to fully populate.

## 4. Sage-Grouse Population Trends (in cooperation with the state wildlife agency)

**Table 6.** Population Trigger Summary by Year

| Year | Number and Location of Soft Population Triggers Tripped | Number and Location of Hard Population Triggers Tripped | Causal Factor(s) |
|---|---|---|---|
| **2015** | None | None | N/A |
| **2016** | None | None | N/A |
| **2017** | None | None | N/A |
| **2018** | None | None | N/A |
| **2019** | One population soft trigger in the Jackson BSU. | None | Causal factor analysis in progress |

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed in this report using the best available rangewide data as described above. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allows the BLM to generate this monitoring summary that is consistent with other BLM state office 5-year monitoring reports across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The BLM has answered this Monitoring Framework question by presenting a summary of data in this report that informs each indicator from the land use plan Habitat Objectives Table by seasonal habitat. The BLM does not manage landscapes or authorize uses based on any single indicator. Some of the desired conditions for the indicators may not be manageable by the BLM nor are they achievable on every acre (e.g., due to ecological site potential) of designated sage-grouse Habitat Management Areas across the landscape that BLM manages. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within habitat management areas may fall within nonhabitat. Additionally, responses to changes in management areas may take several years to many years to achieve changes in plant communities. The indicators do, however, provide a suite of habitat characteristics that helps inform BLM when developing and implementing management decisions and projects within known sage-grouse habitat.

   While habitat cover indicators and their corresponding values can be evaluated individually, as provided under results section 1.2, a full assessment of whether a site is meeting seasonal habitat objectives is accomplished using the site-scale component of the Habitat Assessment Framework (HAF). In a site-scale assessment, the suitability of a particular site (plot) would be based on the values of multiple indicators to determine if the location is suitable, marginal, or unsuitable as sage-grouse seasonal habitat. It is understood that not every site can meet desired conditions, based on ecological site descriptions of site potential. It is important to evaluate site potential because it helps identify those sites that are unable to meet desired conditions; however, site potential is assessed separately from GRSG habitat suitability. Therefore, site suitability needs to be assessed at a fine scale to account for site potential.

   These site-scale HAF assessments will not only determine whether seasonal habitat objectives are being met but will also be included in a multiscale habitat assessment to evaluate parameters important to GRSG at a broader scale. It should be noted that no single indicator will be used to determine site suitability or whether

habitat objectives are being met. Rather it is the full suite of indicators are required to evaluate habitat objectives and site suitability.

The BLM Wyoming State Office is working, collaboratively with BLM field offices and the Wyoming Game and Fish Department, to analyze the data presented in this report at the fine-scale (site-scale) to inform multiscale HAF assessments and report the condition of seasonal habitats for specific GRSG populations. These weighted analyses will also provide suitability estimates for the proportion of seasonal habitat condition across biologically appropriate areas, where possible. For this monitoring report, the data have not been combined in a way that provides the opportunity for interpretation of the data with respect to habitat quality. BLM policy directs the field to use the data collected for these habitat indicators as a whole when assessing suitability of sage-grouse habitat. The results of these habitat assessments (using the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance) are then used during land health evaluations and NEPA analyses in authorization processes.

The Habitat Objectives Table(s) in the SG land use plans describes overall desired conditions through a set of indicators and associated benchmarks for sage-grouse seasonal habitats within the planning area.

***Nesting and Early Brood-Rearing Seasonal Habitat***

Nesting/early brood-rearing seasonal habitat includes five quantitative indicators: sagebrush cover, sagebrush height, perennial grass cover, perennial grass and forb height, and perennial forb cover. Within PHMA and GHMA, the majority of monitoring sites were meeting the sagebrush cover benchmark (5-25%) for PHMA (69%) and GHMA (54%). Sagebrush height (30-80 cm) within PHMA is within the desired condition when combining arid and mesic sites 27% of the time, not meeting 72% of the time, and the indicator was not measured in 1% of the plots. Sagebrush height had slightly better results within GHMA, meeting 43% of the time. Although sagebrush height is not within the desired condition on most plots, this does not necessarily mean these locations are unsuitable. These monitoring locations could have either low ecological site potential for sagebrush cover and height (e.g., shallow soils) or the measured sagebrush cover and height values could be slightly above or below the desired condition. These aspects will be further analyzed within a final HAF report.

For PHMA and GHMA, the perennial grass cover for nesting and brood-rearing habitat are meeting the desired conditions for most locations. Perennial grass cover is meeting at 86% of the total locations monitored within PHMA. GHMA is meeting at 66% of the total locations. Perennial grass and forb height are also meeting at approximately 74% of all locations within PHMA and at 80% within GHMA. Perennial forb cover is not being met at a majority of locations: PHMA (81%) and GHMA (89%) when combining both arid and mesic sites together. Perennial forb cover is highly variable between years because it is dependent on the timing of spring precipitation and associated temperatures. The high variability that is outside management control makes it a difficult indicator to meet depending on annual variability.

***Late Brood-Rearing and Summer Seasonal Habitat***

Late brood-rearing/summer seasonal habitat contains four quantitative indicators: sagebrush cover, sagebrush height, and perennial grass and forb cover, and composition of preferred forbs. Sagebrush cover and height benchmarks are being met on the majority of sites in PHMA and GHMA. Sagebrush cover is within the desired range on 68% of plots within PHMA and 60% of plots within GHMA. Sagebrush height is being met on 64% of the plots within PHMA and 78% in GHMA. Perennial grass and forb cover is being met between 82-92% of the plots within both habitat management areas.

The preferred forb indicator did not meet the benchmark on the majority of the sites. For the plots measured in PHMA and GHMA, 38% and 35% were considered meeting, respectively, for each management area. As mentioned in the nesting/early brood rearing seasonal habitats, forb availability is highly variable between

years because it is dependent on the timing of late summer temperatures, precipitation, and phenology. The high variability that is outside management control makes it a difficult indicator to meet, depending on annual variability and timing of the site survey.

***Winter Seasonal Habitat***

Winter seasonal habitat includes two quantitative indicators: sagebrush cover and sagebrush height above snow. The latter measurement was determined adequate when sagebrush persisted above the average, dry year, wet year, and overall mean snow depths provided by SNOTEL information, as field data was not collected during winter months. Sagebrush cover is being met on 86% and 74% of measured plots, respectfully, for PHMA and GHMA. Sagebrush height above snow is meeting on 49% and 53%, respectfully, for PHMA and GHMA.

It should be noted that winter climatic features change on a daily basis given variable snowfall levels and movement of snow by wind. The movement of snow can create deep snow drifts, which may bury some sagebrush but expose other sagebrush to below expected average snow depths. For example, GRSG have been documented using black sagebrush, a very short statured species, on hillsides and slopes during the winter months. The use of these areas is likely correlated to snow movement along these windswept ridges. The winter habitat indicators should therefore be interpreted with caution based on the data limitations and variable climatic factors. Weather patterns are also highly variable across these monitoring locations and therefore some years may provide sagebrush that is fully accessible to GRSG during the winter months. Greater confidence in these indicators could be rendered from winter surveys, which pose many logistical challenges for field going operations.

***Seasonal Habitat Discussion***

Summaries of 11 indicators relevant to sage-grouse habitat were derived from BLM Landscape Monitoring Framework (LMF) data collected between 2013 and 2018 within and outside sage-grouse habitat. These summaries are weighted estimates representing the area sampled. General trends can be determined from these summaries. Sagebrush cover and height within and outside sage-grouse habitat were static between 2013 and 2018. Grass and forb cover and height were slightly increasing between 2013 and 2018. Cover of bare ground was decreasing between 2013 and 2018. There were less nonnative invasive species within sage grouse habitat than outside habitat, but the amount of nonnative invasive species was slowing increasing within sage grouse habitat. Causal factors as to why these changes have occurred have not been analyzed. These will be analyzed as part of habitat assessments and land health evaluations.

The 2014/2015 Wyoming RMP revisions and 2015 GRSG RMP Amendments included objectives for the percent of the area that would meet the vegetation characteristics and/or habitat characteristics for each of the seasonal use areas. The summary of data included in the report is a plot summary and does not include an estimate of the amount of seasonal habitat that meets the desired conditions for vegetative and habitat characteristics. This can be done when the data is evaluated with an interdisciplinary team following the process outlined in the Sage-Grouse Habitat Assessment Framework Technical Reference 6701-1 and associated BLM implementation guidance. Site scale assessments evaluate the indicators collectively to determine suitability of seasonal habitat condition across biologically relevant areas, where possible.

The number of indicators not meeting the desired condition does not necessarily reflect the BLM's efforts to meet the objectives for several reasons. The indicators are not achievable at every sampling location and/ or are not a manageable component of the plant community. In some cases, past management history, drought, etc. also affect these values and are not factored in at this scale of summary. Also, habitat mapping will contain nonhabitat inclusions, therefore some monitoring plots within either seasonal habitats or habitat management areas may fall on these inclusions of nonhabitat. Additionally, responses to changes in management can take several to many years to achieve changes to plant communities. Therefore, the results

from the data for each habitat objectives do not represent the landscape as a whole. Rather, the results are solely based on the percentage of monitoring plots across the HMAs that are within the desired range of values for a particular indicator and does not represent seasonal habitat suitability, site scale suitability, or site potential.

Interpretation of the data is beyond the scope of this monitoring summary report. A mosaic of vegetation communities and ecological sites occurs across the range of sage-grouse and spatial data used to delineate habitats (seasonal and/or HMAs) to cannot always adequately represent them. However, these factors are documented and considered when habitat assessments are performed and used to inform management decisions within HMAs.

The data presented in the results section indicate that two soft habitat triggers were tripped in Buffalo Connectivity and Bear River Core Areas (BSUs) and since 2015 as a result of the Deer Creek and North Eden Fires, respectively. These triggers remain tripped until baseline conditions are met. Adaptive management responses have been applied as outlined in the land use plan.

2. Are sage-grouse HMAs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   BLM Wyoming administers approximately 3,558 livestock grazing allotments. Land health standards achievement was evaluated in 2015-2018 on some of those allotments, which contain sage-grouse habitat. Those evaluations found that 200,462 BLM acres were meeting, or making progress towards meeting, the standards (Category A). Additionally, 87,729 BLM acres were found not meeting the standards in which it was determined that livestock grazing was a significant casual factor for nonachievement. Grazing management was therefore changed to ensure significant progress towards achievement (Category B). It is important to note that the Category B data only describes the final evaluation of the land health standards in their entirety. It does not specify the results of each individual standard, such as the SSS/Wildlife standard (standard 4). Furthermore, the total acreages identified as "meeting" or "not meeting" land health standards in Categories A and B represent the entire allotment acreage as opposed to the specific acreages within the allotment meeting or not meeting a particular standard. Regardless, this is the best information currently available to answer the question.

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   The monitoring and disturbance data presented in the results section of this report indicates that the amount of disturbance within the planning area has remained under the disturbance caps at the project level and BSU scales within PHMA as described in the land use plan. The BLM monitoring data displayed in this report indicates that approximately 13,172 acres of new surface ground disturbance has been authorized in Wyoming since the 2014/2015 RMP Revisions and 2015 GRSG ARMPA were signed.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse HMAs increasing, stable, or declining?

   The data presented in the results section indicate that sage-grouse populations in Wyoming since 2015 are declining and one soft population trigger was tripped in the Jackson (BSU) in 2019. BLM administered lands are limited in this BSU and are thereby negligible in the adaptive management response to this trigger at this time.

   In conclusion, this BLM Wyoming GRSG 5-Year Monitoring Report provides results of implementation monitoring of the 2015 land use plan decisions rather than assessing effectiveness of the conservation

measures in the plan. This summary of the monitoring data should be considered a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

U.S. Department of the Interior
Bureau of Land Management

# Greater Sage-Grouse Plan Implementation

## Appendix 15: Oregon/Washington State Office Monitoring Report for Washington State

2015–2020

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# Greater Sage-Grouse Plan Implementation

## Appendix 15: Oregon/Washington State Office Monitoring Report for Washington State

## 2015–2020

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# Introduction

This appendix to the Bureau of Land Management (BLM) Greater Sage-Grouse (GRSG) Plan Implementation Rangewide Monitoring Report (Rangewide GRSG Monitoring Report) describes the methods, datasets, and results of implementation and monitoring of sage-grouse conservation measures on BLM-administered lands within the State of Washington. The Rangewide GRSG Monitoring Report contains the results of the BLM's 2015 planning-wide monitoring efforts using datasets and methods identified in the Greater Sage-Grouse Monitoring Framework (GRSG Monitoring Framework) from the BLM 2015 GRSG plan amendments and revisions. However, the Spokane District of BLM was not included in the 2015 planning effort. Rather, management direction for sage-grouse contained in the 1987 Spokane District RMP is focused on achieving the desired habitat conditions identified in the Washington State Recovery Plan for the Greater Sage-Grouse (Stinson et al. 2004). Sage-grouse are a state listed species in Washington.

The Spokane District manages 146,553 acres of land within three Washington sage-grouse Priority Areas for Conservation (PACs). Table 1 shows the acreage of BLM land by PAC.

**Table 1.** Acres and Percent of Land Managed by the Bureau of Land Management in Each Sage-Grouse PAC (Priority Area for Conservation) in Washington

| | Acres of BLM Land | Total Acres | Percent BLM Land |
|---|---|---|---|
| Moses Coulee PAC | 59,270 | 1,096,552 | 5.4% |
| Yakima Training Center PAC | 14,803 | 477,933 | 3.1% |
| Crab Creek PAC | 72,480 | 808,540 | 9.0% |
| **Total** | **146,553** | **2,383,025** | **6.1%** |

The Spokane Resource Management Plan (BLM 1987) provides direction for the conservation of sage-grouse in Washington through general management objectives. General Management Objective #6 states that the BLM shall "manage upland habitat for nongame and game species to meet Washington State Department of Game population targets" (BLM 1987, page 12).

Additional sage-grouse guidance in Washington is provided by BLM's special status species policy (BLM 2008), which directs the BLM to:

- Manage sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of the species habitat (6840.2C)
- Work with partners and stakeholders to develop species-specific or ecosystem-based conservation strategies (6840.2D)

The Washington State Recovery Plan (Stinson 2004) prescribes strategies to recover the species, such as protecting the population and existing habitat, evaluating and restoring habitat, reintroducing birds into vacant habitat, and initiating research and cooperative programs. The BLM participated in the development of the recovery plan and uses the recovery plan to help implement conservation actions in accordance with the special status species policy. The recovery plan incorporates habitat objectives from Connelly et al. (2000). The BLM in Washington also uses the Habitat Assessment Framework (Stiver et al. 2015) to assess habitat objectives for sage-grouse at various scales.

The structure for the Rangewide GRSG Monitoring Report and each of the nine state-specific appendices is based on nine monitoring questions from the GRSG Monitoring Framework, including five questions evaluating

the BLM's National Planning Strategy and four questions on the conservation measures contained in the individual 2015 BLM GRSG land use plan amendments and revision. Since Washington did not complete a land use plan amendment or revision in 2015, this appendix summarizes implementation data and information specific to the status of sage-grouse habitat and populations in Washington State PACs and answers the following four questions by PAC:

1. Do the habitat characteristics of BLM lands meet the guidelines outlined in table 4 of the Washington State Recovery Plan for the Greater Sage-Grouse (Stinson et al. 2004)?
2. Are BLM grazing allotments meeting, or making progress toward meeting, land health standards (LHS), including the Special Status Species/ wildlife habitat standard in PACs?
3. What is the status of disturbance and sagebrush availability within the sage-grouse PACs?
4. Are the sage-grouse populations within this plan boundary and within the sage-grouse PACs increasing, stable, or declining?

# Methods

The BLM OR/WA monitored four factors (one factor per monitoring question) in sage-grouse PACs within the Spokane District in Washington:

1. Habitat characteristics, as articulated in the Washington State Recovery Plan for the Greater Sage-Grouse.
2. Land health standards.
3. Surface disturbance in Washington sage-grouse PACs.
4. Sage-grouse population trends (in coordination with the state wildlife agency).

## Habitat Conditions

### Landscape scale

The number of acres of sagebrush on the landscape is used to describe the overall availability of sagebrush in sage-grouse habitats in Washington PACs. The Washington State recovery plan does not contain landscape-scale habitat objectives. Therefore, this sagebrush availability analysis is for informational purposes only, but is useful to provide context and to assist in identifying causal factors for the site-scale habitat analyses. BLM has developed and maintained a LANDFIRE derived sagebrush dataset (EVT, v1.2) representing the estimated distribution of sagebrush in 2012 to inform this metric. As described in the GRSG Monitoring Framework (BLM-USFS 2014, pgs. 10-12), this dataset has been updated annually to remove sagebrush lost to fire and agricultural conversion, with a single impervious surface removal in the 2017 data set reflecting a cumulative (since 2012) change. Availability of data representing large fires (Monitoring Trends in Burn Severity) causes a 1.5 – 2-year lag in these updates from the current year, hence the 2012 through 2017 timeframe. Beginning with the 2012 dataset, BLM has summarized the change in sagebrush availability in Washington PACs. Impervious surface estimates are known to be overestimated in this data due to the slight spatial shifting of remotely sensed roads data that caused additional acres of impervious surface to be removed from the sagebrush layer even though no new disturbance was created. These calculations represent estimates of sagebrush availability across all lands (regardless of ownership) and track loss of sagebrush only. BLM has not yet implemented the addition of sagebrush to this dataset, representing successful sagebrush restoration activities, as described on page 20 of the GRSG Monitoring Framework.

### Site scale

Site-scale habitat indicator summaries were generated for each PAC from plot-level vegetation data taken in accordance with BLM's AIM sampling methods. All AIM plots within PACs were used regardless of ecological site type. These data were used to evaluate the frequency of quantitative habitat objectives meeting desired conditions as detailed in the Washington sage-grouse recovery plan (table 2), which incorporates habitat guidelines from Connelly et al. (2000). Therefore, the AIM transect data is compared against the Connelly et al. guidelines. Plot sampling dates were used to group plots by seasonal use periods: breeding (March 1 – June 30) includes lekking, pre-nesting, nesting, and early brood rearing; summer (July 1 – October 30) includes late brood-rearing, summering, and early autumn; and winter (November 1 – February 28). Using quantitative thresholds described in Connelly et al. (2000), the habitat indicator summaries provide the number of plots meeting and not meeting desired habitat conditions.

**Table 2.** Habitat Objectives for Sage-Grouse as Displayed in Table 4 of the Washington State Greater Sage-Grouse Recovery Plan (Stinson et al. 2004)

| | Breeding | | Brood-rearing | | Winter[a] | |
|---|---|---|---|---|---|---|
| | Height (cm) | Canopy (percent) | Height (cm) | Canopy (percent) | Height (cm) | Canopy (percent) |
| Sagebrush | 30–80[b] | 15–25 | 40–80 | 10–25 | 25–35 | 10–30 |
| Grass-forb | > 18[c] | > 25[d] | variable | > 15 | — | — |

[a] Above snow
[b] For more mesic sites, the height is 40–80 cm
[c] Measured as droop height; the highest naturally growing portion of the plant
[d] For arid sites, the canopy is ≥ 15%

## Land Health Standards

The Oregon/Washington State Office tracks completion of Land Health Standards thru the Rangeland Administration System (RAS) and the Rangeland Inventory Monitoring Evaluation (RIME) reports. The state office tracked whether the sage-grouse portion of standard 5 was met or making significant progress towards meeting by a data call to the districts to gather the information. A spreadsheet was created using data from the RAS query to identify the permits/leases fully processed from 2015 to 2019. Districts completed the table and provided rational on whether standard 5 was met or not met related to sage-grouse.

The data is presented in the following categories according to whether the sage-grouse portion of standard 5 was met or not met:

- Category A. Rangelands meeting sage-grouse standards or making significant progress toward meeting the standards.
- Category B. Rangelands not meeting sage-grouse standards or making significant progress toward meeting the standards, but appropriate action has been taken to ensure significant progress toward meeting the standards (livestock grazing is a significant factor).
- Category C. Rangelands not meeting sage-grouse standards or making significant progress toward meeting the standards, and no appropriate action has been taken to ensure significant progress toward meeting the standards (livestock grazing is a significant factor).
- Category D. Rangelands are not meeting sage-grouse standards or making significant progress toward meeting the standards due to causes other than livestock grazing.

## Surface Disturbance in PACs

The 1987 Spokane RMP does not contain objectives for tracking, calculating or otherwise managing surface disturbance in sage-grouse habitat. Surface disturbance was calculated for this report by querying BLM's ePlanning database and filtering the results to include all mining and lands and realty projects from 2015 to present. Only authorizations that resulted in new surface disturbance were included in this report. Right-of-way renewals, authorizations for existing structures, use of existing roads, and maintenance within existing right-of-way's were not included.

## Sage-Grouse Population Trends

The WDFW estimates annual rates of population change by comparing total number of males counted at lek complexes in consecutive years (Schroeder et al. 2019). Numbers of males attending lek complexes are analyzed using the greatest number of males observed on a single day for each complex for each year. Population size is estimated using a sex ratio of 1.6 females per 1.0 males (Stinson et al. 2004). Sampling was occasionally affected by effort and/or size and accessibility of leks, and those not counted in consecutive years are excluded from the sample for the applicable intervals (Schroeder 2019).

# Results

This section describes the results of implementation and monitoring of sage-grouse land use plan conservation measures by summarizing four factors described previously: habitat conditions, land health standards evaluations, surface disturbance, and sage-grouse population trends in Washington PACs.

## Habitat Conditions

### Landscape scale

Sagebrush availability, as measured by amount and percent of sagebrush existing vegetation types (EVTs), has declined in all Washington PACs for the period (2012-2017) for which BLM has consistent data on this measure (figure 1).

The decline in sagebrush availability has been most severe in the Yakima Training Center PAC, where sagebrush EVTs declined from 58% of the PAC to 48% between 2012 and 2017 (a 10% loss in 5 years). Most of this loss is due to fires in 2016 and 2017 that removed approximately 41,000 acres of sagebrush from the PAC (figure 2). Agricultural conversion (figure 3) and development (approximated by impervious surface, figure 4) were responsible for approximately 2,800 and 6,500 acres of sagebrush EVT loss, respectively.

Sagebrush availability in the Moses Coulee PAC declined from 33% to 28% between 2012 and 2017 (a 5% loss in 5 years). Moses Coulee experienced approximately 43,000 acres of sagebrush EVTs removed due to fire (about the same as Yakima Training Center), but due to its larger size (twice the size of Yakima Training Center) this represents a smaller percentage than in the Yakima Training Center PAC. Loss due to agricultural conversion was highest in the Moses Coulee PAC with approximately 10,100 acres of sagebrush EVTs lost to conversion in the 5-year period. This amount is over twice as much loss as any other Washington PAC. Approximately 4,700 acres of sagebrush EVTs were lost in Moses Coulee due to development in the 5-year period, which is similar to other PACs.

Sagebrush availability in the Crab Creek PAC declined from 42% to 39% between 2012 and 2017 (a 3% loss in 5 years). Crab Creek has the highest proportion of sagebrush EVTs and has experienced the lowest amount of sagebrush loss. The Crab Creek PAC lost 15,900 acres due to fire, 4,900 acres due to conversion, and 4,100 acres due to development from 2012 to 2017.

Overall, approximately 132,900 acres of sagebrush EVTs have been lost in Washington PACs between 2012 and 2017, a 6% decline during the 5-year period. This rate of loss averages approximately 26,600 acres (1.2%) per year for Washington's three main PACs. However, losses have not been proportionate. Moses Coulee and Yakima Training Center have lost the largest amount of sagebrush (approximately 58,000 and 51,000 acres respectively), while the Crab Creek PAC has lost the least (approximately 25,900 acres). Losses to fire are the biggest factor (averaging about 20,000 acres per year), but agricultural conversion and development are also important factors removing on average about 3,500 and 3,100 acres per year, respectively.

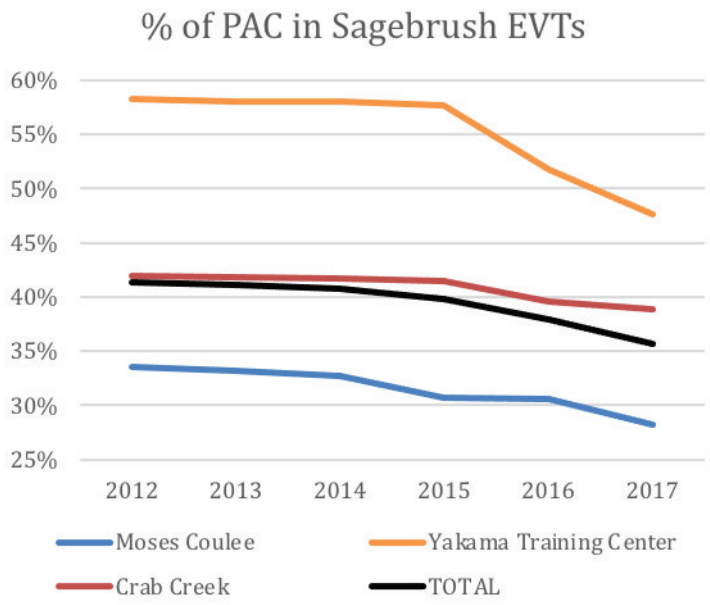


**Figure 1.** Sagebrush availability in Washington Priority Areas for Conservation (PACs) measured as percent of the PAC in sagebrush existing vegetation types (EVTs) from 2012-2017.

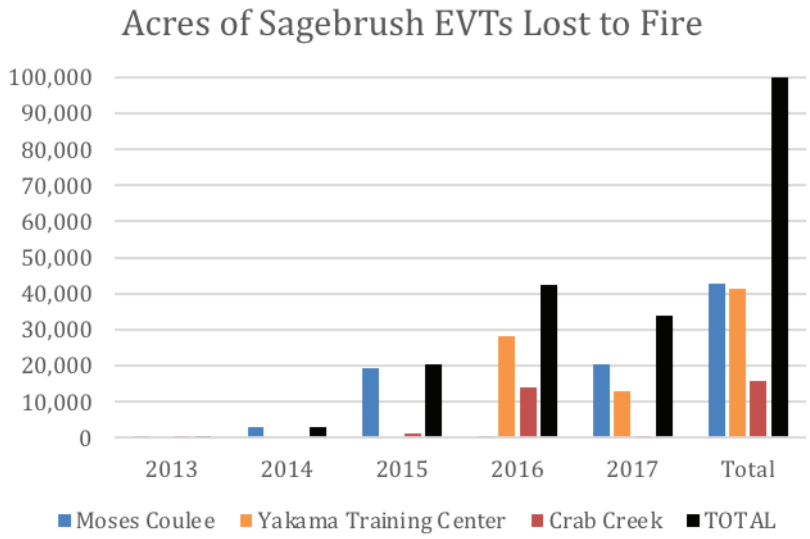


**Figure 2:** Acres of sagebrush existing vegetation types (EVTs) lost to fire in Washington Priority Areas for Conservation (PACs) from 2012-2017.

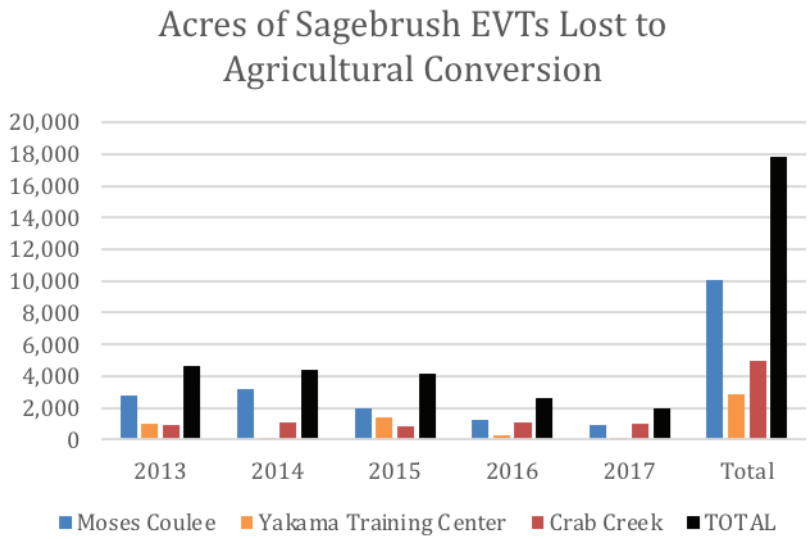


**Figure 3:** Acres of sagebrush existing vegetation types (EVTs) lost to agricultural conversion in Washington Priority Areas for Conservation (PACs) from 2012-2017.

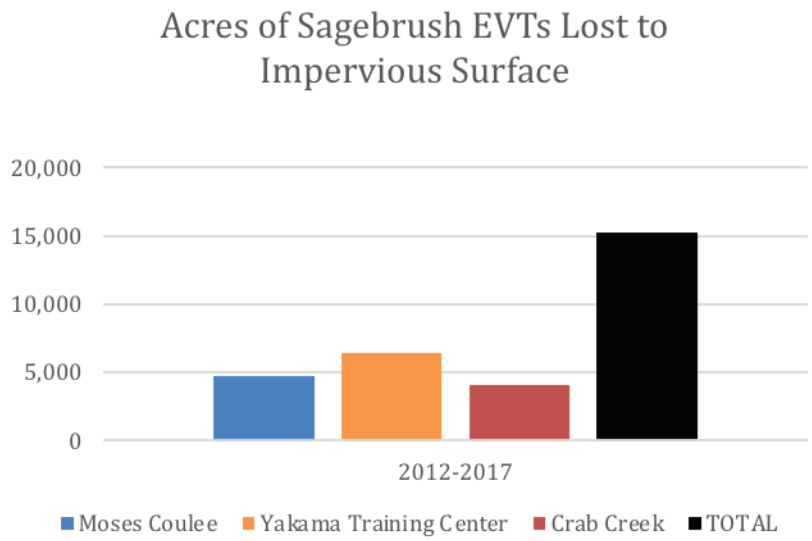


**Figure 4:** Acres of sagebrush existing vegetation types (EVTs) lost to impervious surfaces (development) in Washington Priority Areas for Conservation (PACs) from 2012-2017. Impervious surface estimates are known to be overestimated in this data due to the slight spatial shifting of remotely sensed roads data that caused additional acres of impervious surface to be removed from the sagebrush layer even though no new disturbance was created.

### Site scale

Between 2015 and 2019 the Spokane District established 490 AIM plots on BLM lands in Washington PACs. Habitat conditions by season are summarized for each PAC in table 3.

Overall, the lack of sagebrush canopy cover is the most limiting factor with only 15% of sites in Washington PACs meeting the standard (i.e., desired condition) for percent cover during the breeding season and 23% meeting the standard in winter. Sagebrush heights are meeting the standard at 37% of sites in the breeding season and 56% of sites in winter. However, the absence of sagebrush affects this value, and sagebrush in Washington, including at sage-grouse nest sites, is known to be taller than other regions (Stinson et al. 2004), so height of sagebrush is not thought to be a limiting factor except in some situations where it can be too tall. Rather, the presence and cover of sagebrush appear to be the biggest limiting factors in the site scale data.

Herbaceous indicators for sage-grouse appear to be met at most sites in Washington PACs. Perennial grasses and forb (combined) cover is meeting the standard at 93% of sites in the breeding season and 96% of sites in the summer season. However, percent cover of forbs is only being met at 58% of sites. Height of the herbaceous cover is meeting breeding standards at 96% of sites in the PACs.

**Table 3.** Habitat Objectives Summary Table for Sage-Grouse PACs in Washington Showing the Number of AIM Plots Meeting and Not Meeting Desired Conditions. Desired conditions are taken from the Connelly guidelines (Connelly et al. 2000) as cited in the Washington state recovery plan for arid sites.

| Breeding | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Crab Creek PAC** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Canopy Cover | 15 - 25% | 27 | 25.00% | 81 | 75.00% | | 0 .00% | 108 |
| Sagebrush Height | 30–80 cm | 47 | 43.52% | 35 | 32.41% | 26 | 24.07% | 108 |
| Grass-Forb Height | > 18 cm | 104 | 96.30% | 4 | 3.70% | | 0 .00% | 108 |
| Grass-Forb Canopy Cover | ≥ 25% | 96 | 88.89% | 12 | 11.11% | | 0 .00% | 108 |
| Perennial Grass Cover | > 15% | 95 | 87.96% | 13 | 12.04% | | 0 .00% | 108 |
| Perennial Forb Cover | > 10% | 47 | 43.52% | 61 | 56.48% | | 0 .00% | 108 |
| **Moses Coulee PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 15 - 25% | 3 | 4.55% | 63 | 95.45% | | 0 .00% | 66 |
| Sagebrush Height | 30–80 cm | 23 | 34.85% | 14 | 21.21% | 29 | 43.94% | 66 |
| Grass-Forb Height | > 18 cm | 66 | 100.00% | 0 | 0.00% | | 0 .00% | 66 |
| Grass-Forb Canopy Cover | ≥ 25% | 66 | 100.00% | 0 | 0.00% | | 0 .00% | 66 |
| Perennial Grass Cover | > 15% | 66 | 100.00% | 0 | 0.00% | | 0 .00% | 66 |
| Perennial Forb Cover | > 10% | 49 | 74.24% | 17 | 25.76% | | 0 .00% | 66 |
| **Yakama Training Center PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 15 - 25% | 0 | 0.00% | 19 | 100.00% | | 0 .00% | 19 |
| Sagebrush Height | 30–80 cm | 2 | 10.53% | 1 | 5.26% | 16 | 84.21% | 19 |
| Grass-Forb Height | > 18 cm | 16 | 84.21% | 3 | 15.79% | | 0 .00% | 19 |
| Grass-Forb Canopy Cover | ≥ 25% | 17 | 89.47% | 2 | 10.53% | | 0 .00% | 19 |
| Perennial Grass Cover | > 15% | 19 | 100.00% | 0 | 0.00% | | 0 .00% | 19 |
| Perennial Forb Cover | > 10% | 15 | 78.95% | 4 | 21.05% | | 0 .00% | 19 |

**Table 3** *(continued)*. Habitat Objectives Summary Table for Sage-Grouse PACs in Washington Showing the Number of AIM Plots Meeting and Not Meeting Desired Conditions. Desired conditions are taken from the Connelly guidelines (Connelly et al. 2000) as cited in the Washington state recovery plan for arid sites.

| Summer | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Crab Creek PAC** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Canopy Cover | 10 - 25% | 32 | 21.48% | 117 | 78.52% | | 0 .00% | 149 |
| Sagebrush Height | 40–80 cm | 49 | 32.89% | 51 | 34.23% | 49 | 32.89% | 149 |
| Grass-Forb Canopy Cover | > 15% | 139 | 93.29% | 10 | 6.71% | | 0 .00% | 149 |
| **Moses Coulee PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 10 - 25% | 25 | 18.12% | 113 | 81.88% | | 0 .00% | 138 |
| Sagebrush Height | 40–80 cm | 41 | 29.71% | 50 | 36.23% | 47 | 34.06% | 138 |
| Grass-Forb Canopy Cover | > 15% | 136 | 98.55% | 2 | 1.45% | | 0 .00% | 138 |
| **Yakama Training Center PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 10 - 25% | 2 | 20.00% | 8 | 80.00% | | 0 .00% | 10 |
| Sagebrush Height | 40–80 cm | 1 | 10.00% | 5 | 50.00% | 4 | 40.00% | 10 |
| Grass-Forb Canopy Cover | > 15% | 9 | 90.00% | 1 | 10.00% | | 0 .00% | 10 |

| Winter | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Crab Creek PAC** | | | | | | | | |
| **Indicator Description** | **Desired Condition** | **Monitoring Locations Meeting** | | **Monitoring Locations Not Meeting** | | **Monitoring Locations Where Indicator Not Present** | | **Totals** |
| | | **Count** | **Percentage** | **Count** | **Percentage** | **Count** | **Percentage** | **Count** |
| Sagebrush Canopy Cover | 10 - 30% | 78 | 30.35% | 179 | 69.65% | | 0 .00% | 257 |
| Sagebrush Height | > 25 cm | 156 | 60.70% | 26 | 10.12% | 75 | 29.18% | 257 |
| **Moses Coulee PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 10 - 30% | 33 | 16.18% | 171 | 83.82% | | 0 .00% | 204 |
| Sagebrush Height | > 25 cm | 112 | 54.90% | 16 | 7.84% | 76 | 37.25% | 204 |
| **Yakama Training Center PAC** | | | | | | | | |
| Sagebrush Canopy Cover | 10 - 30% | 2 | 6.90% | 27 | 93.10% | | 0 .00% | 29 |
| Sagebrush Height | > 25 cm | 7 | 24.14% | 2 | 6.90% | 20 | 68.97% | 29 |

## Land Health Standards Evaluations

BLM staff in Washington State conducted 24 Land Health Standards evaluations (33,171 ac) within the Moses Coulee and Crab Creek PACs from 2015-2019 (table 4). This represents 22% of the total BLM land in Washington PACs. No assessments were conducted in the Yakima Training Center PAC during this period.

**Table 4.** Results of Land Health Assessments Conducted between 2015-2019 in Washington PACs. Category A is meeting sage-grouse standards, category B is not meeting, but making progress toward meeting sage-grouse standards (livestock is a significant factor), and category D is not meeting sage-grouse standards, but livestock are not a contributing factor.

| Number of Allotments | Acres | Land Health Category for Standard 5 (sage-grouse) |
|---|---|---|
| 5 | 13,697 | Moses Coulee PAC, Category A |
| 1 | 1401 | Moses Coulee PAC, Category B |
| 2 | 120 | Moses Coulee PAC, Category D* |
| **8** | **15,218** | **Moses Coulee PAC Total** |
| 9 | 1846 | Crab Creek PAC, Category A |
| 0 | 0 | Crab Creek PAC, Category B |
| 7 | 16,107 | Crab Creek PAC, Category D* |
| **16** | **17,953** | **Crab Creek PAC Total** |

* Causes for not meeting land health standard 5 other than current livestock management included: lack of sagebrush due to repeated wildfire, historic agriculture, unauthorized mechanical treatment (sagebrush mowing), invasive species, historic grazing, and transmission lines.

## Surface Disturbance in PACs

The result of tracking the number of BLM surface disturbance authorizations and acres disturbed per program since 2015 are displayed in the following table 5. The Oregon/Washington State Office, Spokane District, authorized four surface disturbing activities on BLM lands within Washington PACs resulting in a total of 206 acres of disturbance.

**Table 5.** Number and Acres of BLM Surface Disturbing Authorizations in Washington PACs from 2015-2019 Per Program Area

| Program Area | Moses Coulee PAC (# of authorizations/total acres) | Yakima Training Center PAC (# of authorizations/total acres) | Crab Creek PAC (# of authorizations/total acres) |
|---|---|---|---|
| Coal Leasing | 0 | 0 | 0 |
| Fluid Mineral Leasing (O&G) | 0 | 0 | 0 |
| Geothermal Energy | 0 | 0 | 0 |
| Locatable Minerals | 0 | 0 | 0 |
| Nonenergy Leasable Minerals | 0 | 0 | 0 |
| Rights-of-Way | 1 / <1 | 1 / <1 | 1 / 2 |
| Vantage to Pomona ROW | 1 / 204* | 0 | 0 |
| Salable - Mineral Materials Disposals | 0 | 0 | 0 |
| Solar Energy | 0 | 0 | 0 |
| Trails & Travel Management | 0 | 0 | 0 |
| Utility Corridors | 0 | 0 | 0 |
| Wind Energy | 0 | 0 | 0 |
| Other (?) | 0 | 0 | 0 |
| **TOTALS** | **2 / 204** | **1 / <1** | **1 / 2** |

* 204 acres of overall disturbance (short and long term) was calculated by the Chapter 4 of the FEIS for this project (BLM 2017). A compensatory mitigation plan was developed to include acquisition of 538 acres of habitat by the BLM within the Yakima Training Center PAC and funds for a Natural Resources Conservation Service Agricultural Land Easement to protect 6,000 acres of Greater Sage-Grouse habitat on private property in Douglas County (Moses Coulee PAC).

In 2019, the Spokane District implemented a significant utility line removal project in occupied habitat within the Crab Creek PAC. The project took place on WDFW, BLM, and private lands. Through matching funds from the local power company, the BLM authorized the burial of 2.0 miles of utilities within an existing county road right-of-way, which enabled the utilities to remove 1.4 miles of overhead power line and 2.0 miles of overhead telephone line adjacent to an occupied lek (3.4 miles total). A windmill (tall structure) was also removed, and 4.3 miles of perch deterrents were installed on an additional power line near this lek.

## Sage-Grouse Population Trends

The 5-year trend for sage-grouse in Washington has been downward with an estimated 987 birds in 2015 compared to 688 birds in 2019, a 30% decline in 5 years (table 6). The decline has been most severe in the Yakima Training Center population (the state's second largest native population), which has declined by 67% in 5 years. The Moses Coulee population (the state's largest population) has declined 13%. The decline in the Crab Creek population is associated with a reintroduced population that has struggled to maintain itself.

**Table 6.** Population Estimates of Greater Sage-Grouse in Washington as Reported by the Washington Department of Fish and Wildlife

| Year | Moses Coulee PAC | Yakama Training Center PAC | Crab Creek PAC | Total |
|---|---|---|---|---|
| **2015** | 686 | 239 | 62 | **987** |
| **2016** | 550 | 127 | 60 | **737** |
| **2017** | 382 | 101 | 26 | **509** |
| **2018** | 577 | 112 | 18 | **707** |
| **2019** | 597 | 78 | 13 | **688** |

The long-term trend for sage-grouse in Washington has also been downward, despite being state-listed as threatened (figure 5). The Washington recovery plan identified a threshold of <650 birds to prompt up listing to state-endangered (Stinson et al. 2004). The state's population briefly dipped below this threshold in 2017, but rebounded in 2018 and 2019 to 688 birds, which is slightly above the up-listing criteria. The goal for sage-grouse recovery in Washington is 3,200 birds.

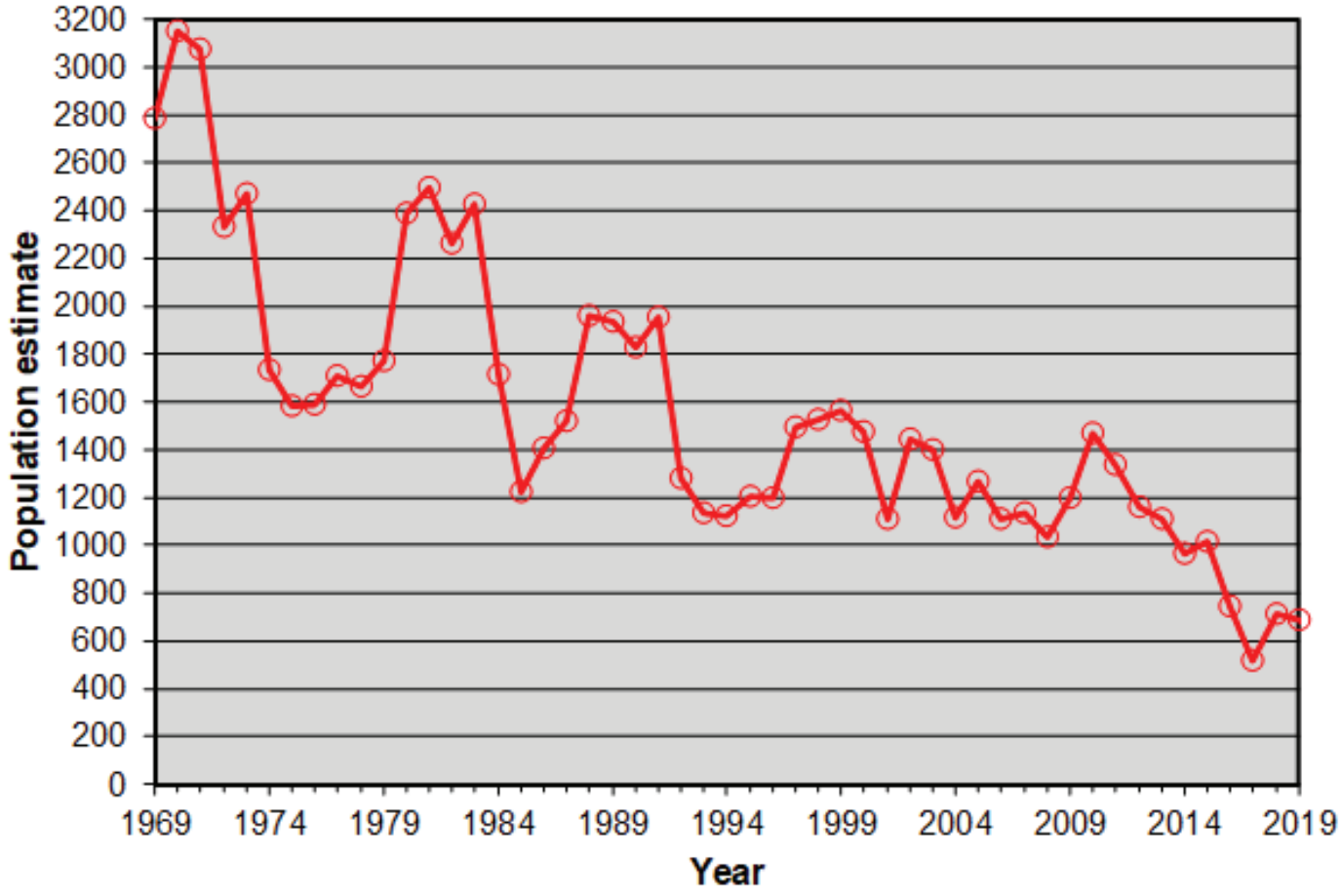


**Figure 5.** Estimate of total population in Washington State from 1969 through 2019. The 2019 population was estimated to be 688, which is slightly higher than the <650 bird threshold for listing as "endangered" in the state.

Long-term trends are presented for each PAC (figures 6,7,8). Each PAC represents a separate isolated subpopulation. No subpopulation thresholds have been identified by the state recovery plan.

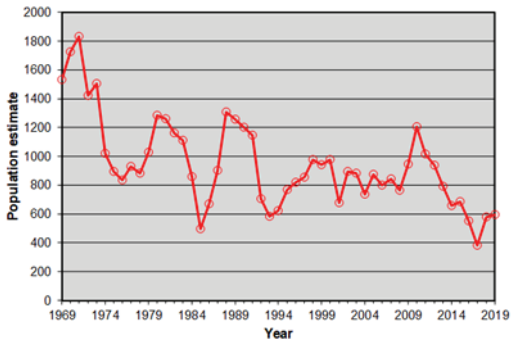


**Figure 6.** Estimate of total population in the Moses Coulee Priority Area for Conservation in Washington State from 1969 through 2019.

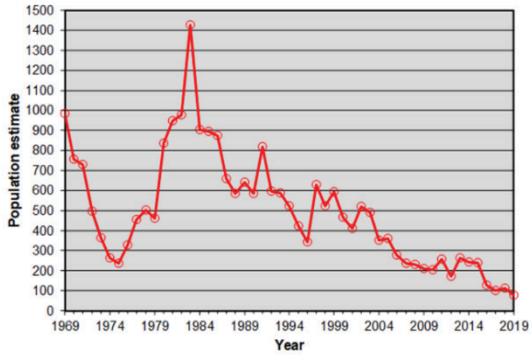


**Figure 7.** Estimate of total population in the Yakima Training Center Priority Area for Conservation in Washington State from 1969 through 2019.

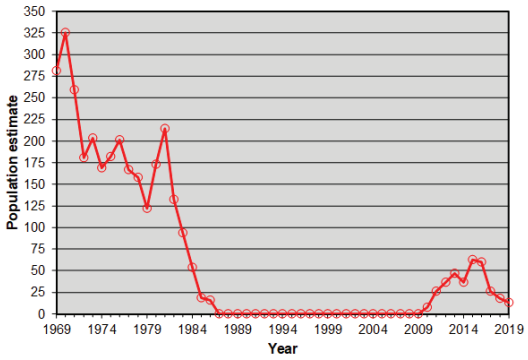


**Figure 8.** Estimate of total population in the Crab Creek Priority Area for Conservation in Washington State from 1969 through 2019.

# Conclusions

The four LUP-specific monitoring questions from the Monitoring Framework are addressed using the best available rangewide data, at a minimum, for the four factors described above with additional information provided by each BLM state office as available. In some cases, the rangewide datasets do not directly answer the question as written in the Monitoring Framework; however, using rangewide datasets allowed the BLM to generate this monitoring summary that is consistent across the range of sage-grouse.

1. Are the plans meeting the sage-grouse habitat objectives?

   The Spokane Resource Management Plan (RMP) directs the BLM to "manage upland habitat [for sage-grouse] to meet Washington State Department of Game population targets." While the Washington state recovery plan for the greater sage-grouse identifies a population target (3200 birds), it does not include landscape scale habitat objectives, so it is not possible to answer this question at the landscape scale. However, landscape-level sagebrush availability in PACs across all lands is declining due mainly to fire, agricultural conversion, and development. Loss from these factors is largely outside the BLM's control due to the small percentage of land BLM manages.

   On BLM lands, at the site scale, habitat objectives as defined by the Connelly (2000) guidelines and Washington state recovery plan are being met for the vast majority of plots except many plots do not have sagebrush. Only 15 to 23% of sites (depending on season) currently have enough sagebrush to be considered as meeting the objective (see landscape scale factors above). However, the herbaceous layer of vegetation, which is more under BLM's control (e.g., through grazing authorizations) is meeting Connelly guidelines on most plots within PACs.

2. Are sage-grouse PACs within the land use plan area meeting, or making progress towards meeting, land health standards, including the Special Status Species/ wildlife habitat standard?

   Yes, of the land BLM assessed between 2015 and 2019, 54% of the acres are meeting, or making progress towards meeting sage-grouse habitat standards. The other 46% of acres are not meeting sage-grouse standards due to factors outside of the control of the BLM such as wildfire and historic land uses (e.g., agricultural conversion, improper grazing, and development).

3. Is the plan meeting the disturbance objective(s) within sage-grouse areas?

   As with question one, the Washington state recovery plan does not include landscape scale disturbance objectives, therefore it is not possible to answer this question. However, consistent with general goals in the recovery plan, the BLM has limited its disturbance authorizations to less than 5 acres in 5 years and secured compensatory mitigation to offset 204 acres of disturbance from the Vantage-to-Pomona transmission line. The BLM has also worked with partners to remove power lines and install perch deterrents.

4. Are the sage-grouse populations within this plan boundary and within the sage-grouse PACs increasing, stable, or declining?

   Overall sage-grouse population in Washington have declined 30% (from 987 to 688 birds) in the last 5 years and are now close to the threshold (<650 birds) of being up listed to endangered in the state. The Moses Coulee population increased slightly from a low in 2017 but has not recovered from the declines associated with the massive conversion of CRP that started in 2010-2011. The Yakima Training Center population has declined steadily for decades, despite population augmentation efforts, and now appears

at serious risk of extirpation. The Crab Creek population appears to be at risk of extirpation following a reintroduction attempt. The Yakama Nation population (not addressed in this report) appears to be extirpated, following a reintroduction attempt.

In conclusion, although the Spokane District management plan does not provide explicit objectives for sage-grouse, its general guidance to work with the Washington Department of Fish and Wildlife (WDFW) to meet population targets has resulted in a high degree of collaboration and recovery effort. The lack of demand for disturbance authorizations on BLM land has also allowed habitat under BLM's control to be conserved. Fire and instability in the Conservation Reserve Program (managed by U.S. Department of Agriculture) continue to be driving factors that are largely outside of BLM's control. Land health standards are largely being met where there is adequate sagebrush, but populations of sage-grouse in Washington are declining in every PAC and are at critical levels.

This appendix to the Rangewide GRSG Monitoring Report is an implementation monitoring report rather than an assessment of effectiveness of the conservation measures in the 1987 Spokane RMP. It provides some trend information but is primarily a baseline report. Subsequent monitoring reports should be able to describe trends in the data themes outlined in the Monitoring Framework and may be able to determine effectiveness of the conservation measures for sage-grouse.

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