# United States Department of the Interior

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To: Oregon District Managers (Burns, Lakeview, Prineville, Vale)

From: Deputy State Director, Oregon/Washington

Subject: Status of 2019 Oregon Greater Sage-Grouse Adaptive Management Triggers

## Purpose

This information bulletin (IB) transmits the results of the Oregon Greater Sage-grouse (sage-grouse) adaptive management thresholds (triggers) evaluation for calendar year 2019. This IB summarizes 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.

## Background

The Adaptive Management Strategy outlined in Appendix J of the 2015 Bureau of Land Management (BLM) Oregon Greater Sage-Grouse Approved Resource Management Plan (ARMPA) identifies hard and soft triggers for habitat and populations within Oregon Priority Areas for Conservation (PAC). Oregon's 20 PACs mirror Oregon Department of Fish and Wildlife (ODFW) Core Area Habitat and correspond directly to BLM's Priority Habitat Management Area. 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.

The Adaptive Management Strategy outlines the process the Oregon/Washington (OR/WA) BLM uses in cooperation with the ODFW and the U.S. Fish and Wildlife Service (FWS) to determine if the soft and hard triggers have been exceeded. The BLM in cooperation with ODFW and FWS finalized the 2019 trigger calculation results on January 21, 2020. The BLM OR/WA State Office notified Vale, Burns, Lakeview, and Prineville Districts on January 24 that

12 Oregon PACs had tripped a soft (7 PACs) or hard (5 PACs) trigger in 2019 (see Attachment 1 map). With this IB, the nine required hard trigger responses listed on page J-8 of the ARMPA remain in effect until a plan amendment makes a change or the annual review of the relevant conditions listed on page J-11 of the Adaptive Management Strategy determines the trigger has been reversed.

**2019 Habitat Trigger**

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. Oregon PACs are 89.4 percent to 99.8 percent capable 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 potential sage-grouse habitat are added to the current habitat acres when the BLM field office has verified the treated area currently supports ≥5 percent cover of sagebrush species and <5 percent tree cover.

Current habitat was below the soft trigger threshold (i.e. <65 percent current habitat) in the Cow Lakes and Trout Creek PACs in 2019 (see table below). Both PACs were below the habitat threshold prior to the 2015 ARMPA. The historic Vale Seeding Project and wildfire removed sagebrush from large sections of the Cow Lakes PAC. Seventy-two percent of the Trout Creeks PAC has burned at least once since 1975, with many acres burned multiple times. In 2012, the perimeters of the Holloway and Long Draw fires together encompassed 271,884 acres (69 percent) of the PAC.

Oregon PACs with 65 to 70 percent current habitat also are identified in the table below. While these PACs have not tripped a habitat trigger, they are at risk of doing so with one large wildfire. Wildfire activity in central and eastern Oregon in 2019 was below normal, like 2018. Fires in seven PACs (Beatys, Cow Valley, Crowley, Drewsey, Folly Farm/Saddle Butte, Soldier Creek, and Steens) burned approximately 5,117 acres of existing sage-grouse habitat. The largest fire (4,991 acres) was in the Beatys PAC. Two small fires in the Steens PAC burned 35 acres of sage-grouse habitat. While these fires did not reduce habitat below the threshold, the PAC remains close to tripping the habitat soft trigger.

Since 2012, the BLM has completed 229,086 acres of vegetation treatments within the six PACs identified below. In 2019, 14,960 acres within the Bully Creek PAC and 1,521 acres within the Steens PAC were treated. These treatments included cutting, piling and burning juniper and chemical treatment of invasive annual grasses. Juniper expansion, wildfire, and invasive annual grasses are the major threats to sage-grouse habitat in Oregon and other Great Basin states.

| PAC Name | Total PAC Acres | Capable Habitat Acres | Acres of Habitat Lost 2013-2019 | Current Habitat Acres | Vegetation Treatment Acres[1] | Percent Current Habitat | 2019 Habitat Trigger |
|---|---|---|---|---|---|---|---|
| Bully Creek | 279,855 | 264,572 | 10,660 | 182,905 | 80,400 | 69.1 | none |
| Burns | 35,769 | 32,364 | 0 | 22,125 | 1,986 | 68.4 | none |
| Cow Lakes | 249,733 | 240,158 | 320 | 148,662 | 12,321 | 61.9 | soft |
| Folly Farm/Saddle Butte | 251,558 | 232,381 | 789 | 158,454 | 23,726 | 68.2 | none |
| Steens | 185,730 | 166,065 | 384 | 107,990 | 45,997 | 65.0 | none |
| Trout Creeks | 393,473 | 378,221 | 0 | 222,239 | 64,656 | 58.8 | soft |

[1] All treatment types completed since 2012; includes multiple treatments of sites

**2018 Population Trigger**

Population triggers are based on a combination of actual and estimated maximum counts of males at complexes of closely allied leks, within 1 mile of each other, between which a set of males may move. Sage-grouse population estimates based on actual and projected counts of males attending leks contain multiple assumptions regarding lek formation and extinction rates. Lek counts are an index of population size, and the actual number of sage-grouse in each PAC remains unknown. However, the BLM and ODFW have confidence in the accuracy of the population estimates due to the high proportion of leks surveyed in a given year (64 percent of known leks state-wide were surveyed in 2019) and consistency in monitoring methods applied over the previous 23 years. Moreover, strong agreement exists between the BLM and ODFW population estimates derived from the same base data but using different analytical methods.

The sage-grouse population in Oregon experienced a third consecutive year of population decline in 2019, decreasing by 24.9 percent from 2018, to an estimated 13,827 individuals. Declines were observed in 17 of 19 PACs where data was sufficient to analyze trend. Four PACs tripped a population trigger for the first time, although no new hard trigger thresholds were exceeded. While a 3-year decline is not uncommon with sage-grouse populations, the 2019 population estimate is the lowest ODFW has observed since starting lek monitoring in 1980 and is currently more than 50 percent below the 2003 statewide baseline population of approximately 29,000 individuals.

Population triggers were exceeded in 11 PACs in 2019 (see table below). Seven of these PACs tripped a population trigger in 2016, 2017, and 2018. The remaining four PACs (Beatys, Drewsey, Pueblos/S. Steens, and Steens) tripped the soft population trigger for the first time. While the 5-year moving average population size of these four PACs remained above the PAC's threshold, the population decline in 2019 tripped an annual soft trigger. Beatys and Drewsey PACs recorded a >40 percent decline in a single year, while Pueblos/S. Steens and Steens PACs recorded a third consecutive year of >10 percent decline in 2019.

| PAC Name | Soft Threshold (males) | Hard Threshold (males) | 2019 Estimate (males) | Annual Percent Change | 5-Year Average (males) | 2019 Trigger Status |
|---|---|---|---|---|---|---|
| Baker | 246 | 170 | 103 | +6.5 | 108 | hard |
| Beatys | 907 | 582 | 469 | -54.5 | 1039 | soft[1] |
| Brothers/N. Wagontire | 149 | 129 | 91 | -16.8 | 106 | hard |
| Bully Creek | 265 | 208 | 241 | -19.8 | 307 | none |
| Burns | NA | >60% drop over 2 years | NA | NA | NA | none |
| Cow Lakes | 291 | 217 | 191 | -16.8 | 248 | soft |
| Cow Valley | NA | >60% drop over 2 years | 109 | +2.8 | NA | none |
| Crowley | 341 | 267 | 233 | -26.0 | 287 | soft |
| Drewsey | 163 | 131 | 132 | -52.0 | 244 | soft[1] |
| Dry Valley/Jack Mountain | 219 | 161 | 66 | -3.2 | 92 | hard |
| Folly Farm/Saddle Butte | 91 | 57 | 113 | -24.0 | 130 | none |
| Louse Canyon | NA | >60% drop over 2 years | 152 | -6.7 | NA | none |
| Pauline/12-Mile/Misery Flat | 346 | 294 | 346 | -19.2 | 400 | none |
| Picture Rock | 26 | 19 | 4 | -20.0 | 8 | hard |
| Pueblos/S. Steens | 151 | 56 | 106 | -17.6 | 187 | soft[2] |
| Soldier Creek | 273 | 178 | 273 | -20.0 | 386 | none |
| Steens | 141 | 88 | 96 | -38.0 | 163 | soft[2] |
| Trout Creeks | NA | >60% drop over 2 years | 235 | -19.5 | NA | none |
| Tucker Hills | 48 | 40 | 51 | 18.6 | 60 | none |
| Warner | 530 | 403 | 319 | -21.0 | 437 | soft |

[1] >40% decline in a single year; [2]>10% decline in three consecutive years

Population trends in the 11 PACs that tripped a population trigger in 2019 are described below. Oregon PACs are located within "mid-scale areas" (shown in parentheses for each PAC) that were identified and mapped by the BLM and ODFW for use in the sage-grouse Habitat Assessment Framework and for prioritizing funding to habitat conservation and restoration projects in high priority areas of the state.

Baker PAC (Baker) population has declined approximately 75 percent since 2005 and has remained stagnant in recent years. The hard trigger threshold was first exceeded in 2016. Although we estimate a small population increase in 2019 due to counting 9 birds on a lek that had not been surveyed in the last 8 years, it is more likely the population is stable.

Beatys PAC (Warner-Meinzer) has the largest number of known leks (155) and lek complexes (86) of any Oregon PAC. Since peaking in 2003, male lek attendance has declined 75.3 percent. In 2019, the population declined 54.5 percent. While the 5-year mean population remained above the trigger threshold, the large decline in a single year tripped the soft population trigger. Beatys population has gone through two population cycles since 2003. This PAC will come out

of the soft trigger in 2020 if the annual population estimate increases or if it declines by <10% of the 2019 estimate.

Brothers/N. Wagontire PAC (Central Oregon) population first tripped the soft population trigger in 2016 and tripped the hard population trigger in 2018. During 2019, ODFW conducted 115 hours of helicopter lek searches, covering approximately 4,000 miles in the PAC and surrounding habitat. No new leks were discovered inside the PAC, and only one new lek was identified in the surrounding general habitat.

Cow Lakes PAC (Owyhee River) population tripped the soft population trigger in 2016-2019. Because the PAC has also tripped the soft trigger for habitat, it has tripped a hard trigger. Despite a 16.8 percent decline in 2019, the 5-year mean annual population increased from 246 to 248, and the average annual change in male lek attendance remained positive. The sage-grouse population in Idaho, which is connected to the Cow Lakes PAC, has declined significantly since the 2015 Soda Fire and tripped Idaho BLM's hard population trigger in 2018 and 2019.

Crowley PAC (Owyhee River) population first tripped the soft population trigger in 2016. Growth in 2017 and 2018 was insufficient to lift the population out of trigger status. The population declined 26 percent in 2019 but remains above the hard trigger threshold.

Drewsey PAC (Central Oregon) population declined in 2019 following five years of growth. While the 5-year mean population remained above the trigger threshold, the large decline in a single year tripped the soft population trigger in 2019. This PAC will come out of the soft trigger in 2020 unless the annual population estimate declines again by ≥40% of the 2019 estimate.

Dry Valley/Jack Mountain PAC (Warner-Meinzer) population has declined 76.5 percent since 2003, tripping the soft population trigger in 2016 and hard trigger in 2017, 2018, and 2019. Sage-grouse habitat in this PAC was heavily impacted by the 2012 Miller Homestead Fire.

Picture Rock PAC (Warner-Meinzer) population has declined 89.7 percent since 2003 and tripped the hard population trigger in 2017 and 2018. All seven known leks in the PAC were surveyed in 2019. Four males were observed at one lek (20 percent decline from 2018). Lek counts indicate more birds exist in habitat surrounding the PAC than inside the PAC.

Pueblos/South Steens PAC (Warner-Meinzer) population declined 17.6 percent in 2019, marking the third consecutive year of >10 percent decline per year. While the 5-year mean population remained above the trigger threshold, three consecutive years of >10 percent decline tripped the soft population trigger. Male lek attendance in this PAC has declined 71.4 percent since 2003. This PAC will come out of the soft trigger in 2020 if the annual population estimate increases or if it declines by <10% of the 2019 estimate.

Steens PAC (Warner-Meinzer) population tripped a soft trigger due to three consecutive years of >10 percent decline. The 5-year mean population remained above the trigger threshold. Male lek attendance in this PAC has declined 77.3 percent since 2003. This PAC will come out of the soft

trigger in 2020 if the annual population estimate increases or if it declines by <10% of the 2019 estimate.

Warners PAC (Warner-Meinzer) has declined 57.3 percent since 2003 and first tripped the soft population trigger in 2016. The population continued to decline in 2019. In 2019, the 5-year mean population estimate is 34 male birds above the hard trigger threshold.

**Hard Trigger Responses**

Responses to triggers that involve management changes or more restrictive plan level actions to address declines in habitat or population are outlined in the Adaptive Management Strategy (ARMPA, Appendix J). All required hard trigger responses will remain in place until the habitat or population trigger, whichever was tripped, rises above the trigger threshold. Refer to Appendix J, page J-8 for required hard trigger responses.

**Causal Factor Analysis and Annual Review**

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 in a previous year. 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. After peaking in 2016, the Oregon population experienced a third consecutive year of population decline in 2019. While a three-year decline is common with sage-grouse, this decline was exceptionally large and occurred not only in Oregon but also Idaho, Nevada, Utah, Wyoming and Montana. 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.

Attachment 2 provides a brief overview of the CFA procedures and results. Each year Field Offices should review their CFA reports to update the population and habitat information, as well as to determine if the analysis and management recommendations remain valid or if the report should be revised. The annual review is documented on the BLM Causal Factor Analysis Annual Review Form. If BLM determines information in the CFA remains valid, then the CFA does not need to be revised beyond including the habitat and population triggers information outlined in this IB.

**Administrative or Mission Related:** Mission

**Districts with unions** are reminded to notify their unions of this information bulletin and satisfy any bargaining obligations before implementation. Your servicing Human Resources Office or Labor Relations Specialist can provide you with assistance in this matter.

Signed by
Lenore Heppler
Acting Deputy State Director

Authenticated by
K. Wentworth
Data Records Administrator

Attachment(s)
1. Map of PACs that tripped triggers in 2019 (1 p)
2. Causal Factor Analysis Process and Results (1 p)

Distribution
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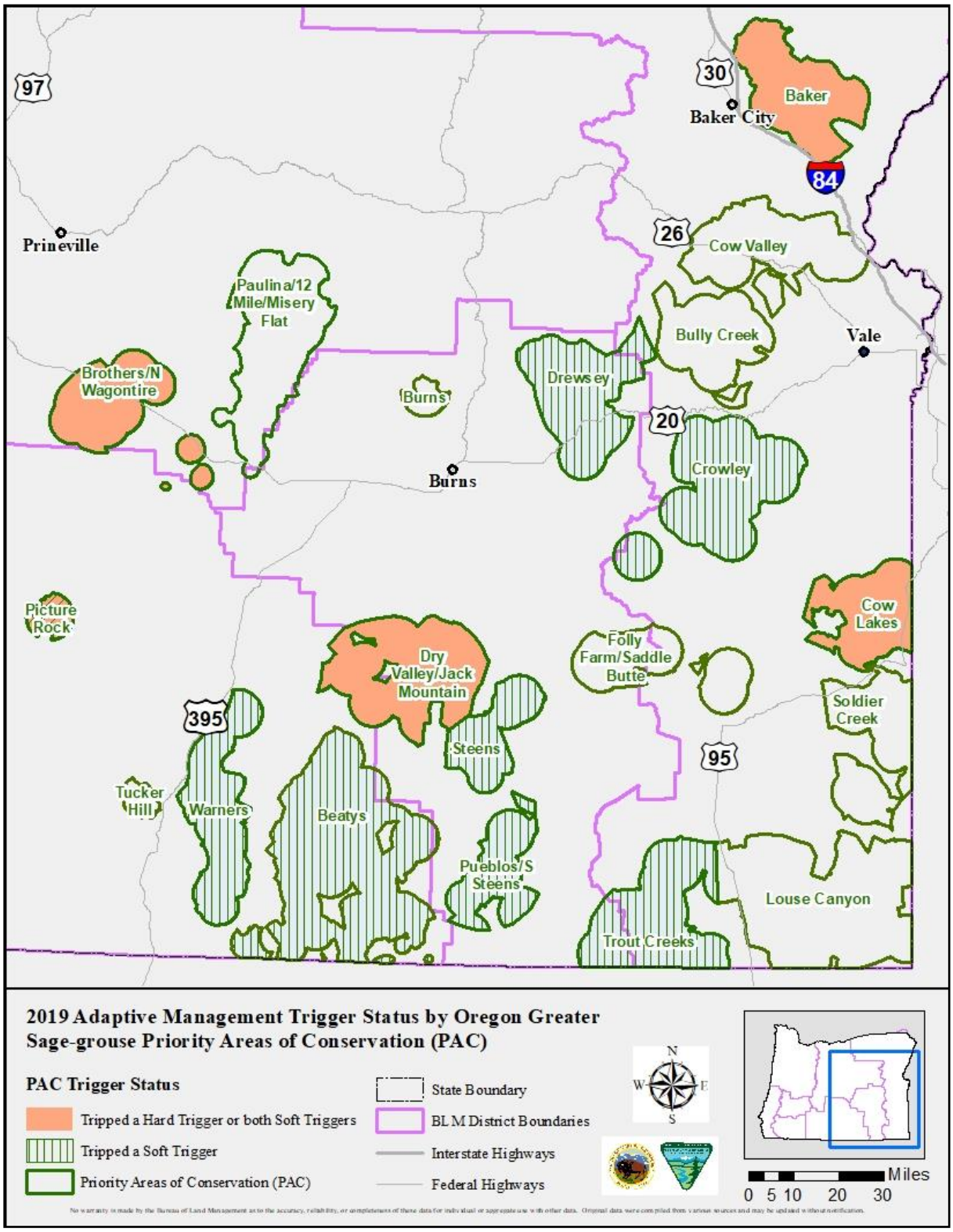
# Attachment 1

## Map of Priority Areas for Conservation in Oregon



# Attachment 2

## Causal Factor Analysis Process and Results

Interdisciplinary teams with Oregon Department of Fish and Wildlife (ODFW) and U.S. Fish and Wildlife Service (FWS) representation conducted the analyses. ODFW re-convened Local Implementation Teams composed of ODFW, Soil and Water Conservation District(s), local government, and private landowners. BLM invited tribal governments to participate in hard trigger analyses and in most soft trigger analyses. Additional outreach occurred to livestock permittees. Public meetings were held for the Baker and Brothers-Wagontire PACs.

Common and wide-spread causes identified below include fire, invasive annual grasses, degraded native understory vegetation, and fence collision risk. Factors with a possibly significant role are human infrastructure (mostly roads and power lines), improper livestock grazing (based on last Land Health Evaluation), and re-occurring drought. While the amount of infrastructure within a PAC may not have changed appreciably in the years leading up to the decline, predator populations may have expanded due to subsidies associated with power lines and roads. The degree to which West Nile virus has caused a population to decline or prevent an increase during favorable environmental conditions is unclear. Finally, Baker PAC is physically isolated from other priority habitat in Oregon and Idaho. The extent of genetic isolation is unknown, but telemetry studies suggest very little movement in or out of this PAC.

| Possible Causes or Factors | Baker | Crowley | Cow Lakes | Trout Creeks | Dry Valley-Jack Mtn (draft) | Warners (draft) | Picture Rock | Brothers- N. Wagontire |
|---|---|---|---|---|---|---|---|---|
| Isolated/small size | X | | | | | | X | |
| Agriculture Conversion | X | | | | | | | |
| Conifer encroachment | | | | | | X | X | |
| Energy Development | | | | | | | | |
| Infrastructure | Unclear | Unclear | Localized | | | | | Unclear |
| Wild horses | | X | | | | | | |
| Urbanization | | | | | | | | |
| Sagebrush Elimination | | | X | | | | | |
| Fire | Localized | X | X | X | X | | | |
| Invasive plants | X | X | X | X | X | | | |
| Mining | | | | | | | | Localized |
| Livestock grazing | Unclear | | Unclear | Unclear | | | | Unclear |
| Recreation | Localized | | | | | | | Unclear |
| Predator populations | X | X | Unclear | | | Localized | | Unclear |
| Native understory condition | X | Unclear | X | X | | | | |
| Drought | X | X | | | X | X | X | |
| West Nile Virus | Unclear | Unclear | Localized | | | | | Unclear |
| Habitat fragmentation | X | X | X | | | | | |
| Fence collisions | X | X | Localized | | | X | X | |
| Hunting | | | | | | | | X |
| Crested wheatgrass seedings | X | | X | | | | | Unclear |
| Sage-grouse translocations | | | | | | X | | |
| Research | | | | | | X | | |