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BUREAU OF LAND MANAGEMENT

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To: Burns, Lakeview, Prineville and Vale District Managers

From: Deputy State Director, Oregon/Washington

Subject: Status of 2017 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 2017. This evaluation summarizes where triggers have been exceeded, which triggers have been exceeded, the required responses if a hard trigger has been exceeded, and a brief summary of the causal factor analysis process. Factors that likely caused triggers to be exceeded in 2016 also are described.

Background

The Adaptive Management Strategy outlined in Appendix J of the 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). 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) Bureau of Land Management (BLM) used in cooperation with the Oregon Department of Fish and Wildlife (ODFW) and the U.S. Fish and Wildlife Service (FWS) to determine if the soft and hard triggers were exceeded in 2017. The BLM, the ODFW, and the FWS finalized 2017 analyses and results in mid-December 2017. On December 19, 2017, the Vale, Burns, Lakeview, and Prineville Districts were notified that eight PACs had tripped a soft or hard trigger in 2017 (Attachment 1).

2017 Habitat Trigger/Results

Habitat triggers are calculated from the proportion of acres capable of supporting sage grouse that are in current (existing) habitat. Capable habitat includes areas that either currently support vegetation cover or areas with the potential to support vegetation cover appropriate for sage grouse use (i.e., ≥ 5 percent cover of sagebrush species and < 5 percent tree cover). The BLM used the Integrated Landscape Assessment Project (ILAP) vegetation data layer developed by the Institute for Natural Resources (INR) at Oregon State University to calculate the 2017 habitat triggers. First, current habitat was combined with potential habitat to identify all capable habitat within a PAC. Second, existing or current habitat that burned in 2017 with high or moderate soil burn severity, based on Burned Area Reflectance Classification (BARC) maps, was considered habitat loss and removed from the calculation.

Current habitat in two PACs was below the soft trigger threshold in 2017 (see table below). These PACs were also below the soft habitat trigger in 2016. While habitat loss in these two PACs since 2013 has been minimal, both were already below the habitat threshold in 2015 when the ARMPA was approved.

PAC Name	PAC (Acres)	Capable (Acres)	Habitat Loss 2013-2017 (Acres)	Current Habitat (Acres)	Current Habitat (Percent)	Trigger Tripped
Cow Lakes	249,733	240,157	320	148,662	61.9	soft
Trout Creeks	393,490	378,238	0	222,239	58.8	soft

In 2017, wildfires burned 2,451 acres of existing sage grouse habitat within eight Oregon PACs: Cow Valley, Cow Lakes, Crowley, Folly Farm/Saddle Butte, Louse Canyon, Beatys, Picture Rock, and Paulina/12 Mile. Habitat lost to fires in 2017 did not cause sagebrush availability to drop below adaptive management triggers. The Hawk Fire in Cow Lakes PAC removed additional habitat below the soft trigger that had tripped in 2016. The Ana Fire in Picture Rock PAC burned 991 acres of existing habitat, the largest habitat loss in an Oregon PAC in 2017, resulting in a 2.7 percent decrease in sagebrush availability. Since the adaptive management threshold for acres lost in a single year is 5 percent, the fire did not cause Picture Rock PAC to trip the habitat trigger, although the population hard trigger was exceeded.

2017 Population Trigger/Results

The BLM population calculation methods are found on the OR/WA Greater Sage-grouse Sharepoint in the [Adaptive Management Library](#). Population triggers are based on a combination of actual and estimated counts of males at lek complexes. Methods for projecting sage grouse population estimates back in time contain multiple assumptions regarding lek formation and extinction rates (ODFW 2017). However, the BLM and the ODFW have strong confidence in the accuracy of the estimates due to the high proportion of leks surveyed in a given year (> 50 percent of known leks) and consistency in monitoring methods over the previous 21 years. Further, strong agreement exists between the BLM estimates and the ODFW estimates (ODFW 2017) derived from the same base data using slightly different calculation methods. Unlike the BLM's method, population estimates in the [ODFW 2017 Oregon Greater Sage-Grouse Population Monitoring Report](#) are not projected back beyond 2013.

Population triggers were exceeded in seven PACs in 2017, one fewer than in 2016 (see table below). Paulina/12-Mile PAC, which tripped a soft trigger in 2016, showed three consecutive years of population growth and resulted in the PAC no longer exceeding triggers (i.e., the soft trigger was untripped). The four PACs with soft population triggers are described below followed by a description of the three hard trigger PACs.

PAC Name	Soft Threshold (males)	Hard Threshold (males)	2017 Estimate (males)	Percent Change: Annual	Percent Change: Five Year	Five Year Average (males)	Trigger
Baker	246.3	169.9	111.8	8.4	-7.7	123.6	hard
Brothers-N. Wagontire	149.0	128.7	87.7	-17.3	-11.2	130.1	soft
Cow Lakes	291.4	216.8	261.0	-1.3	0.9	235.8	soft
Crowley	341.2	267.3	338.6	27.8	0.3	292.6	soft
Dry Valley-Jack Mountain	218.6	160.9	94.6	-5.3	-34.7	109.9	hard
Picture Rock	25.5	19.1	7.0	-36.4	-30.8	14.4	hard
Warners	530.3	403.3	453.5	-19.0	-4.3	421.5	soft

- Brothers-North Wagontire tripped the soft population trigger in 2016 and 2017. Both the BLM and the ODFW population estimation methods indicate a 17.3 percent decline in 2017. If the population continues to decline in 2018, the hard population trigger will likely be tripped.
- Cow Lakes PAC population has been in decline since 2006. The ODFW reported the number of males counted at the same leks in 2016 and 2017 fell 7.8 percent. However, the 5-year average is positive (0.9 percent), possibly indicating the population has stabilized.
- Crowley PAC population experienced a large increase (27.8 percent) in 2017, although the ODFW calculation showed a much smaller increase (4.1 percent) in leks counted in both 2016 and 2017. The annual increase in 2017 was insufficient to bring the population above the soft population trigger.
- Warners PAC population exceeded the soft population trigger in 2016 and declined an additional 19.0 percent in 2017. The ODFW methods indicate male attendance at the same leks monitored in 2003 and 2017 has declined 53.5 percent. However, the 5-year population average appears to be stabilizing above the hard trigger threshold.
- Baker PAC population has been in a sustained decline with no sign of recovery. Male attendance at lek complexes monitored in both 2003 and 2017 indicates the population has declined 75.0 percent. The hard trigger threshold (170 males) was exceeded in 2016 and 2017. While more birds were counted on leks in 2017 than in 2016, resulting in a positive annual change, most of the increase was due to discovery of a new lek.
- Dry Valley-Jack Mountain PAC tripped the soft population trigger in 2016 and hard trigger in 2017. The ODFW reported a similar decline (-4.4 percent) from 2016 to 2017. Males counted at the same leks in 2003 and 2017 has declined 70 percent. Lek size (males counted per year) has declined significantly since 1981. Many of the historically surveyed leks within the PAC burned in 2012 during the Miller Homestead fire. Multi-year droughts following the fire likely have contributed to the serious population decline.

Lakebeds and meadows that were used heavily by sage grouse broods prior to the fire have greatly diminished in size or disappeared entirely.

- Picture Rock PAC sage grouse population began a decline in 2006, exceeded the soft population trigger (25.5 males) in 2016, and tripped the hard trigger (19.1 males) in 2017. The ODFW reported lek attendance is down 82.1 percent since 2003; only seven males were counted on leks in 2017.

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 (Appendix J) of the Oregon ARMPA. Required responses to hard triggers tripped in Baker and Cow Lakes PACs in 2016 have been in effect since April 4, 2017, when IB OR 2017-040 was issued. While there are nine required responses (Attachment 2), the BLM had opportunity to implement only one of these nine in 2017. The Vale District implemented a voluntary closure at the Virtue Flat off-highway vehicle area in the Baker PAC during the 2017 sage grouse lekking season. All required hard trigger responses will remain in place until the habitat or population trigger, whichever was tripped, rises above the trigger threshold.

Causal Factor Analysis

Causal factor analysis (CFA) reports are complete or under review for eight of the nine Oregon PACs that tripped triggers in 2016. A report was not prepared for Paulina/12 Mile PAC because the 5-year population trend indicated it would rise above the soft population trigger in 2017 which it did. Attachment 3 provides a brief explanation of the CFA procedures and results.

In IB No. OR-2017-040, the Oregon State Office reported sagebrush availability in the Steens PAC had dropped below the soft trigger level. Upon further analysis, the district determined habitat levels were actually above the threshold level. Because vegetation restoration treatments completed after 2011 had not been considered, the calculation underestimated the amount of current habitat within the PAC. Since 2014, 1,636 acres of juniper invaded sagebrush habitat has been treated in the Steens PAC increasing the percent available habitat from 64.3 to 65.0 percent. Since the soft habitat trigger threshold is 65 percent, the Steens PAC actually had not tripped a trigger in 2016.

The CFA is an annual review of Oregon PACs that are below a trigger threshold. Reports for triggers tripped in 2017 will be prepared in 2018. No further review is required for Paulina/12-Mile PAC. For all other PACs that tripped triggers in 2017, the annual review should update the population and/or habitat trend information from the previous year. The annual review should also briefly explain all actions taken or recommended in response to the triggers. Districts are encouraged to use the annual review template provided with the CFA worksheet available on the OR/WA Sage-Grouse Sharepoint in the [Adaptive Management library](#).

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
Kathryn J. Stangl
Deputy State Director
Division of Resources, Lands, Minerals, and Fire

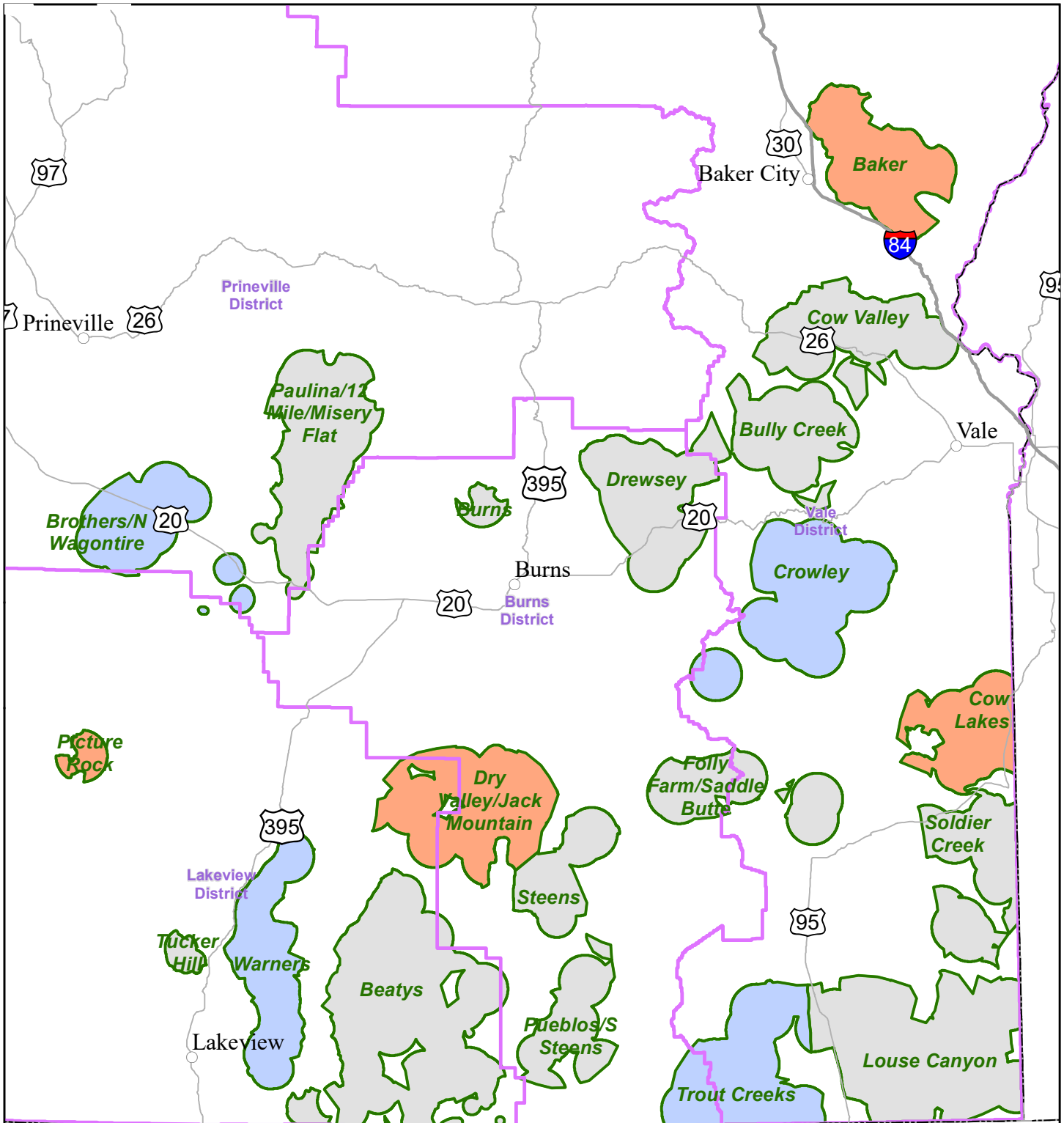
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K. Wentworth
Records Section

Attachments

- 1 - Map of PACs – 2017 Tripped Triggers (1p)
- 2 - Immediate Required Hard Trigger Responses (1p)
- 3 - 2016 Causal Factor Analysis Process and Results (1p)

Distribution

WO230 (Vickie Herren)
WO200 (Gordon Toevs)
OR931 (Lee Folliard, Molly Anthony, Glenn Frederick)
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Matt Obradovich
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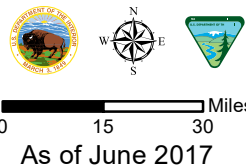


2017 Adaptive Management Trigger Status by Oregon GRSB Biologically Significant Units (Oregon PACs)

- 2017 GRSB Triggers**
- Hard Trigger
 - Soft Trigger
 - No Trigger

- State Boundary
- District Area Boundaries
- Biologically Significant Units (Oregon PAC)

- Interstate Highways
- Federal Highways



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Immediate Required Hard Trigger Responses

Within the boundaries of the Baker, Cow Lakes, Dry Valley-Jack Mountain, and Picture Rock Priority Areas of Conservation (PAC), the following direction takes effect immediately upon notification of District Offices:

- Do not use prescribed fire to treat sagebrush in the <12 inch precipitation zone. As a last resort and after all other treatment options have been explored and as site-specific variables allow, consider using prescribed fire for fuel breaks in stands where annual grass is a very minor component in the understory.
- Do not conduct mechanical sagebrush treatments in known Greater Sage-grouse winter habitat.
- Limit broadcast burning of juniper-invaded sagebrush to no more than 160 acres per treatment block in Priority Habitat Management Area (PHMA).
- Issue no new geophysical exploration permits in PHMA.
- Make PHMA exclusion areas for new right-of-way authorizations. The Boardman to Hemmingway right of way is an exception for the Baker PAC, but the environmental impact statement must analyze the impact of this disturbance on Sage-grouse populations within the PAC.
- Restrict OHV use to areas greater than 2 miles from occupied and pending leks during the breeding season (March 1 through June 30). Exceptions are permitted in order to protect human life and safety, such as search and rescue operations and wildfire response, and to support essential farm operations in keeping with the terms and conditions of valid grazing permits, such as fence repair and to deal with ailing or dead livestock.
- When reseeding closed roads, primitive roads, and trails use appropriate native seed mixes and require use of transplanted sagebrush. Use of non-native species is not permitted.
- Prohibit new road construction within four miles of active sage-grouse leks, subject to valid, existing rights and to protect human health and safety.
- Prohibit construction of recreational facilities, such as kiosks, signs, and toilets, within two miles of occupied and pending leks.

These decisions shall remain in place unless removed by a plan amendment or when the affected PACs rise above the soft trigger threshold, with an upward trend:

- Baker PAC – the five-year running mean sage-grouse population must exceed 246 males
- Cow Lakes PAC – the five-year running mean sage-grouse population must exceed 291 males AND at least 65 percent of the area of the PAC capable of supporting sagebrush must have at least five percent sagebrush cover and less than five percent tree cover with sagebrush cover
- Dry Valley-Jack Mountain PAC - the five-year running mean sage-grouse population must exceed 219 males
- Picture Rock PAC – the five-year running mean sage-grouse population must exceed 25 males

2016 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 ^a	Crowley	Cow Lakes ^a	Trout Creeks	Dry Valley-Jack Mtn (draft)	Warners (draft)	Picture Rock	Brothers-Wagontire
Isolated/small size	X						X	
Conifer encroachment						X	X	
Energy Development								
Infrastructure	Unclear	Unclear	Localized					Unclear
Energy development								
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	X				Unclear
Recreation	Localized	Unclear						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	Localized			X	X	
Hunting								X
Crested wheatgrass seedings								Unclear
Sage-grouse translocations						X		
Research						X		

^a Hard trigger in 2016. All others were soft triggers.