WESTERN ASSOCIATION OF FISH AND WILDLIFE AGENCIES

HUNTING SAGE-GROUSE, IMPACTS AND MANAGEMENT

Ten of 11 states where Greater Sage-grouse occur allow hunting of sage-grouse. Sage-grouse have been state-listed as Threatened in Washington since 1998, and have not been hunted since 1990. Although sage-grouse were found not warranted for listing under the Endangered Species Act in 2015 (FR 80:59858-59942), concern over the potential consequences of a Federal listing have raised questions about the potential impact of hunting on sage-grouse populations. It is important to note that the Fish and Wildlife Service, in their assessment of threats in the 2015 not-warranted listing decision, did not view regulated hunting as a significant threat to the species, but described the need for continued close attention by state wildlife agencies to monitor population trends and adjust seasons if needed (FR 80:59924). This paper reviews scientific information pertaining to impacts of regulated hunting on sage-grouse populations and describes measures states have taken to minimize potential impacts of sage-grouse hunting.

Dinkins and Beck (personal comm.) analyzed sage-grouse lek data and harvest estimates from 1995-2013 provided by states and two Canadian provinces in an attempt to elucidate patterns between relative harvest and lek trends. While analysis of these data continues, they have concluded that discontinuing harvest in smaller populations did not result in positive lek trends; however, discontinuing hunting seasons with relatively higher harvest pressure in the largest population in their analyses resulted in higher population growth rates. They also concluded that State and provincial wildlife agencies were adept in changing harvest regulations to prevent hunting sage-grouse populations facing significant lek trend declines.

Historically, sport harvest of sage-grouse and other upland birds was viewed as compensatory mortality (meaning it replaced natural mortality and was not additive to it), and had little or no impact on subsequent population sizes (Connelly and Reese 2008). Recently the idea that all harvest of sage-grouse or other upland birds is compensatory has been replaced by the idea that low levels of harvest may be compensatory, but higher levels of harvest may be at least partially additive to natural mortality (Connelly et al. 2003, Reese and Connelly 2011). Based on a review of the literature, Connelly et al. (2000) suggested that no more than 10% of the autumn population be removed through harvest, and that populations of fewer than 300 birds (100 males counted on leks) should not be hunted. Sedinger et al. (2010), based on an analysis of 18 years of band recovery data in Colorado, found strong evidence that harvest rates near 10% were compensatory and not additive.

States have responded to concern about sage-grouse status and to declining populations by adopting more conservative approaches to regulating hunting based on the Connelly et al. (2000) guidelines (responses through 2007 reviewed in Reese and Connelly 2008). All states now evaluate sage-grouse seasons annually and make modifications, if needed, based on trends in counts of males on leks. Wyoming, which has more birds over larger areas than any other state, has shifted opening dates later, reduced season length from 31 to 11 days, and reduced bag limits from 3 birds daily and 6 in possession to 2 birds daily and 4 in possession in an effort to reduce potential impacts to sage-grouse. Wyoming also closes areas with fewer than 300 birds, and recommends more conservative seasons ranging from closures to reduced season lengths and bag limits if populations are declining. Colorado evaluates 3-year moving average high male counts (HMC) against triggers in local conservation plans to recommend closure or modifications of hunting seasons and bags, with a maximum season length of 7 days and bag of 2 and 4 compared to historical season lengths of 30 days and bags of 3 daily and 9 in possession. Idaho uses an explicit Adaptive Harvest Management (AHM) approach where season length and bag limits are either: Closed, Restrictive (7-day season, bag of 1 and 2), or Standard (21-day season, bag of 2 and 4) based on how 3-year average trends in HMC within each of 14 management zones relate to a baseline. Montana reduced sage-grouse season length from 62 to 30 days in 2014, and has implemented their conservative bag limit (2 daily,

4 in possession) since 2007. Hunting is closed in any unit where average HMC is 45% or more below the long-term average for 3 or more consecutive years. Oregon establishes a maximum harvest of 5% of a management unit population estimate, then issues limited tags to maintain harvest below the 5% threshold. California has closed hunting in the Bi-State population of sage-grouse, hunting permit numbers in other areas are adjusted based on male counts and fall population estimates. The California Fish and Game Commission responded to low lek counts this Spring and closed seasons for 2017 based on a recommendation from the California Department of Fish and Wildlife. Nevada has also closed hunting to Bi-State sage-grouse, seasons in other areas are adjusted to conform to the Connelly et al. (2000) guidelines. Nevada estimates statewide harvest of sage-grouse has been between 2% and 6% of the estimated fall population annually, and has closed sage-grouse seasons in five counties including 23 separate hunt units since 1997 in response to local, short-term declines. South Dakota issues limited permits with a bag and possession limit of 1, and closes hunting seasons when less than 250 males are counted on leks in the spring. The sage-grouse hunting season will be closed in 2017 in South Dakota. North Dakota has also closed sage-grouse hunting seasons for the past several years because the number of males on leks has fallen below levels that will support hunting.

Other Considerations. Sage-grouse hunters and sportsmen in general represent a constituency of sage-grouse and sagebrush advocates. Hunting license fees and matching Federal aid dollars are used by state wildlife agencies for conservation and restoration activities on sagebrush rangelands that benefit sage-grouse, sagebrush dependent wildlife and grazing interests. Sage-grouse hunting also represents an economic boost to local communities. In addition, sex and age-ratios obtained from hunter-collected wings provide information that will be critical to estimation of sage-grouse population size and trends now and in the future. State wildlife agencies have thresholds and other means to close hunting seasons when necessary to prevent impacts to sage-grouse populations which increases public confidence; widespread closures of hunting when not needed may send a message that populations are far more imperiled than they are, which could lead to further land use restrictions.

Conclusions:

- Sage-grouse hunting is managed conservatively by state wildlife agencies consistent with established and scientifically supported guidelines, including closures when populations decline below levels that can support hunting.
- Sage-grouse hunting, as currently regulated, is likely compensatory in most areas and therefore not likely to increase overall mortality rates.
- State wildlife agencies continue to support research on effects of hunting and will continue to incorporate new information into hunting season recommendations in the future.
- Sage-grouse hunters have been, and remain an important ally in sage-grouse conservation efforts with a vested interest in insuring populations remain not warranted for listing.

Literature Cited is available under the Sagebrush Ecosystem Initiative tab at the WAFWA website

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