



WYOMING CHAPTER – THE WILDLIFE SOCIETY

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July 24, 2017

Wyoming Game and Fish Department
Wildlife Division
Attn: Regulations
3030 Energy Lane
Casper, WY 82604

RE: Chapter 60: Regulation Governing Greater Sage-grouse Raised on Private Game Bird Farms

Dear Wyoming Game and Fish Department,

On behalf of The Wyoming Chapter of the Wildlife Society (WY-TWS), please find the following comments on Chapter 60 (Draft 5-22-17.12): Regulation Governing Greater Sage-grouse Raised on Private Game Bird Farms.

About The Wildlife Society

The Wildlife Society is an international organization committed to addressing national and international issues that affect the current and future status of wildlife in North America and throughout the world. WY-TWS, overseen by a voluntary executive board, is comprised of wildlife professionals who collectively promote awareness of and continued improvement in science-based wildlife management in Wyoming. There is a tremendous amount of peer-reviewed scientific research on Greater Sage-grouse, much of which was conducted and published by members of WY-TWS. WY-TWS has been following the progress of this bill and had engaged while it was being considered by the State Legislature. We appreciate the opportunity to share our biological expertise with the Wyoming Game and Fish Department (Department) as you work with the Wyoming Game and Fish Commission to adopt final rules to implement the law by September 1, 2017. Our purpose for engagement in this issue is to provide the scientific expertise that will result in minimized impact to Wyoming's wild populations of Greater Sage-grouse.

Recommendations to Improve Chapter 60

The following concerns and suggestions are based on the expertise of our membership, an extensive review of the peer-reviewed literature, and conversations with scientists and colleagues knowledgeable in rearing sage-grouse in captivity.

Section 3(c) – Specification of appropriate “collection area(s),” geographic areas determined by the Department where sage-grouse nest sites may be disturbed by a licensee for the sole purpose of collecting grouse eggs.

- **Recommendation:** Core Population Areas¹ should *not* be included in geographic areas determined suitable by the Department for egg collection and subsequent release efforts. Wyoming’s long-standing Core Area strategy follows the established mitigation hierarchy understanding that the primary mission is avoiding impacts to the best remaining habitat for Greater Sage-grouse².

Section 3(e) – Separation from wild sage-grouse, including a buffer to reduce chances of disease transmission between captive and wild sage-grouse, is critical.

- **Recommendation:** We recommend explicitly establishing separation from wild sage-grouse in the definition of “enclosure.” Refer to comments on Section 7(b).

Section 3(i) – Given different (although dependent) success criterion specific to the differing goals of farming sage-grouse in Wyoming as suggested by the suite of regulations proposed, “successfully raised” needs to include more than the captive flock-specific criterion established in Section 3(i).

- **Recommendation:** We recommend establishing a definition of “successfully raised” specific for and unique to captive sage-grouse (rather than game birds in general as suggested by the current definition).

Scientific literature suggests that most artificially-reared grouse species die within a few weeks of release due primarily to behavioral deficiencies in released animals, including foraging, predator avoidance, and social deficiencies. Further, the scientific literature pertaining to the captive rearing of sage-grouse as well as other species is consistent in suggesting that the methods, handling protocols and facilities used to rear sage-grouse in captivity directly influence the survivability of individuals upon release. Finally, although there has been some success releasing captive-reared Attwater’s prairie-chicken and having them survive to breeding age and nest, “documented survival of offspring from these nests has been extremely poor to non-existent” (USFWS 2010). Therefore, the release of sage-grouse that are behaviorally adapted to survive to be recruited into a wild population, nest, and successfully raise chicks constitute unique success criteria for a bird farm.

- **Recommendation:** We recommend establishing a definition of “successfully raised” specific for and unique to released sage-grouse.
- **Recommendation:** We recommend explicitly establishing that “successfully raised” for released sage-grouse is defined as rearing sage-grouse in captivity that are behaviorally suited to survive to sexual maturity (1 year) upon release and are documented to be recruited into the wild breeding population.
- **Recommendation:** We additionally recommend that the definition of “successfully raised” for released sage-grouse includes language establishing that at least a certain proportion of released

¹ To identify core regions Doherty et al. (2011) used an abundance-weighted simple kernel function to delineate priority nesting areas based on proximity of surrounding leks.

² <https://wgfd.wyo.gov/Habitat/Sage-Grouse-Management/MitigationDecemberwithupdateFINAL>

sage-grouse are documented to successfully nest and raise chicks that survive to sexual maturity, basing this proportion on demographic rates documented for wild sage-grouse.

- **Recommendation:** Finally, we suggest including this definition of successfully raised released sage-grouse for license renewal—e.g., licensee needs to empirically demonstrate that released sage-grouse meet the successfully raised (for released sage-grouse) standard for license renewal.

Section 3(j) – The “needs” of sage-grouse and their offspring is well established in the scientific literature, and should be defined. The needs of sage-grouse change seasonally, and “vegetation consistent with the needs of sage-grouse” must address both the cover and nutritional requirements of the species on a seasonal basis.

- **Recommendation:** We recommend paraphrasing from the following narrative to establish a definition for “needs”:

Sagebrush provides cover for adult and juvenile sage-grouse year-round, with specific sagebrush canopy cover and height requirements for nesting, brood-rearing and winter. Tall grasses provide cover during the nesting and brood-rearing seasons. Cover requirements for sage-grouse on a seasonal basis are available in the literature. Adult sage-grouse eat sagebrush year-round, but consume substantial quantities of forbs and insects during the spring and summer. Forbs and insects provide the nutritional boost these individuals require for successful nesting and raising of chicks. Lists of the primary forbs consumed by adult sage-grouse are available in the literature. Chicks require high protein diets consisting primarily of insects for the first 30 days after hatching, when their diets shift to consuming a combination of insects and forbs. The proportion of insects to forbs required in the diet of chicks for survival and optimal growth is available in the literature. Chicks will begin to consume sagebrush later in the summer of their first year, and will transition to a diet that mirrors adults as forbs become unavailable later in the fall.

Section 6(a) – The monitoring requirements described in the Regulations are insufficient to make the determination that a bird farm raising sage-grouse is “maintained disease free.” The scientific literature, including sage-grouse specific literature, is consistent in cautioning that disease is a substantial and constant risk to wild animals being reared in captivity,³ and the critical function disease monitoring plays in minimizing that risk.

- **Recommendation:** We recommend that, in addition to the protocols established in the Regulations, (1) licensees are required to have their facilities directly inspected by the Wyoming Game and Fish Department (Department) in coordination with the Wyoming State Veterinary Laboratory at least quarterly to include the direct testing of captive sage-grouse for macro- and microparasites and their associated infectious diseases; (2) all sage-grouse that die in a facility, including eggs that do not hatch, are necropsied as described in Section 6(i), and (3) language similar to Section 7 in Chapter 40 (Regulations Governing Commercial Game Bird Farms) is added to the sentence in Section 6(a) describing the approach to handling any sage-grouse

³ Christiansen, T.J., and C.M. Tate. 2011. Parasites and infectious diseases of Greater Sage-Grouse. Pp. 113-126 in S.T. Knick and J.W. Connelly (editors). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biology (vol. 38), University of California Press, Berkeley, CA. See Table 8.1 for known parasites and infectious diseases of Greater Sage-Grouse – listed by state.

suspected of being exposed to disease—i.e., “The licensee shall notify the Department within twenty-four (24) hours of *having reason to believe* that sage-grouse held under a license pursuant to this regulation *may have been* exposed to or contracted a contagious disease or parasite” (emphasis added).

- **Recommendation:** We additionally recommend adding the following language paraphrased from Chapter 40 to the end of Section 6(a): “It shall be a violation of this regulation to remove captive sage-grouse exposed to, suspected of being exposed to, or which have contracted a contagious disease or parasite from the holding facility(ies) without prior authorization from the Department.”

Section 6(b) – The cleaning and sanitizing of sage-grouse farming facilities is critical to reduce risk of disease, and approaches to doing so should be explicitly addressed by the Department.

- **Recommendation:** We suggest adding “using Department approved protocols and products” to Section 6(b).

Section 6(e) – The list of infectious diseases and macro- and microparasites potentially affecting sage-grouse as reported in the literature³ is far more extensive than the list of diseases included in Section 6(e). Further, it is worth emphasizing that there are always risks that release programs may inadvertently infect wild populations with pathogens for which those populations have no resistance, even with intensive pre-release screening.

- **Recommendation:** We recommend that Section 6(e) be rewritten similar to Section 2(d) in Chapter 40 to read (emphasis added): “All sage-grouse scheduled for release shall test negative within thirty (30) days prior to release for *all infectious, contagious or communicable diseases or parasites including, but not limited to*, *Mycoplasma gallisepticum*, *M. synoviae*, *M. meleagridis*, avian influenza, *Salmonella pullorum* (Pullorum Disease), *S. gallinarum* (Fowl Typhoid) and *West Nile virus (WNV)*.”
- **Recommendation:** We further recommend that language specific to the monitoring of wild populations that may come into contact with released sage-grouse be added to Section 6(e)—e.g., “The licensee, in coordination with the Department, will be required to rigorously monitor wild populations that may come into contact with released sage-grouse for disease exposure to include the full spectrum of diseases and parasites known to impact sage-grouse as well as diseases and parasites that could potentially impact the species but are currently not known to impact the species.”

Section 6(f) – We question why the Regulations specify parasites in Section 6(f) and not diseases.

- **Recommendation:** We recommend that, in addition to the parasite monitoring program established by Section 6(f), the Regulations establish that infectious, contagious and communicable disease monitoring programs as approved by the Department be maintained by the licensee [see comment Section 6(a)].

Section 6(g) – The literature suggests that sage-grouse succumb to many of the diseases affecting the species within days rather than years (e.g., sage-grouse experimentally infected with WNV die within 6 to 8 days). Therefore, annually-scheduled inspections by Department personnel are not sufficiently frequent to make the determination that a facility is disease free.

- **Recommendation:** We recommend that (1) facilities raising sage-grouse are inspected *at least* quarterly, (2) inspections are done by Department personnel in coordination with the Wyoming State Veterinary Laboratory, and (3) inspections explicitly include the direct disease testing of captive sage-grouse in addition to the inspection of a licensee’s enclosure, hatchery facility and sage-grouse.
- **Recommendation:** Further, we recommend including language similar to Section 5(b) in Chapter 40 at the end of Section 6(g) to read: “Department personnel may inspect facilities or sage-grouse at any time to insure they meet disease free requirements.”

Section 7(b) – The separation of captive sage-grouse from wild sage-grouse is important to reduce the chance of the potential transfer of infectious diseases or macro- and microparasites.

- **Recommendation:** We recommend that separation from wild sage-grouse be explicitly established as a requirement of captive sage-grouse holding facilities.
- **Recommendation:** Additionally, we recommend that the 100-foot unoccupied buffer zone mentioned in Section 7(b) be designed and maintained to *eliminate entirely* the possibility that wild sage-grouse will come within 100 feet of captive individuals.

Section 8 – Given sage-grouse behavior (extensively documented in the scientific literature), the majority of wild female sage-grouse impacted by the actions authorized under Section 8 of the Regulations will more than likely be effectively eliminated from the reproducing population the year impacted. To reduce the potential population-level effects pursuing the actions authorized under Section 8 may have on wild populations, we **recommend** the following:

- Section 8(b) – It needs to be explicitly stated that eggs are collected by a licensee for the sole purpose of populating a captive sage-grouse flock at that licensee’s facility (e.g., eggs cannot be sold to another licensee).
- Section 8(c) – It is absolutely critical that Section 8(c) explicitly establish that the Department **must directly** supervise the collection of sage-grouse eggs.
- Section 8(g)(iv) – A maximum number of nests across all authorized egg collection areas during a calendar year must be identified in the Department’s Certification. It is worth noting that the number of nests that can be disturbed in any single year should be determined by the range conditions for that year—i.e., the Department should reduce the number of nests allowed to be impacted during a given year if range conditions are not expected to be optimal for high productivity (i.e., residual grass cover and height is reduced, and long-range forecasting is not favorable).
 - **Recommendation:** We recommend that the total number of nests impacted in any one year does not exceed 33 nests per licensee (based on an average clutch size for sage-grouse of 7.5 eggs).
 - **Recommendation:** We further recommend that the number of nests counted towards the maximum include nests that were disturbed inadvertently by the licensee’s activities (e.g., females flushed from a formed nest bowl that contained no eggs).
- Section 8(g)(v) – Egg collection **must** be completed no later than May 15 to avoid impacting sage-grouse during the hatching and early brood-rearing periods.

- Section 8(g)(viii) – The use of pointing breed dogs to find nests should be explicitly established as the only technique permitted beyond the random searching for nests on foot.
 - **Recommendation:** We recommend adding additional language to Section 6(g)(viii) establishing that (1) the use of telemetry or any other form of electronic tracking of females is not permitted for locating sage-grouse nests, (2) any and all techniques designed to flush females from nests (e.g., chain dragging) are not permitted as means of locating nesting sage-grouse, and (3) the use of any motorized vehicle, including all-terrain vehicles, is strictly prohibited off of designated roadways during nest searching.

Section 10(c) – We question the clause “except as may be provided by Wyoming Statutes” being included in Section 10(c). As detailed above, captive sage-grouse may represent a serious disease risk to wild populations. Further, issues relating to release programs raised in the scientific literature include negative impacts to wild populations from decreased breeding success, increased predation, and genetic pollution.

- **Recommendation:** We recommend establishing that the unauthorized release of captive sage-grouse for *any reason* is a violation resulting in the immediate loss of the licensee's sage-grouse certification and forfeiture of all sage-grouse held in captivity at the licensee's facility.

Section 13 – Ultimately, the success of the sage-grouse farming program will be judged on the number of captive reared sage-grouse that survive to be recruited into a wild population, and that subsequently successfully raise chicks that are recruited thereby augmenting the wild population. If a licensee is unable to raise sage-grouse in captivity in such a way as to meet both definitions of successfully raised, then the Department should have the authority to revoke that licensee’s certification.

- **Recommendation:** We recommend adding language included in the definitions of “successfully raised” – both for captive and released sage-grouse (as recommended above) – in Section 13.

Section 2(h) Chapter 40 – The scientific literature suggests closing bird farming facilities housing species of conservation concern to the public. If these facilities are to be open to the public, visitors should practice the same rigorous disease-prevention methodology as the bird farm staff.

- **Recommendation:** We recommend including language similar to Section 2(h) Chapter 40 in Chapter 60, emphasizing that signage needs to explicitly inform those entering a game bird farm raising sage-grouse that any and all people approaching pens housing sage-grouse need to follow Department approved protocols of sanitization and decontamination prior to doing so.

We thank you for your consideration,



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President, WY-TWS



Matt Holloran
Former President, WY-TWS