

ALBERTA WILDERNESS ASSOCIATION "Defending Wild Alberta through Awareness and Action"

Honourable Leona Aglukkaq Minister of the Environment House of Commons Parliament Buildings Ottawa, ON K1A 0A6 By email: <u>Minister@ec.gc.ca</u>

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February 16, 2014

Dear Minister Aglukkaq,

Re: December 2013 proposed Amended Recovery Strategy for the Greater Sage-Grouse (Centrocercus urophasianus urophasianus) in Canada

Alberta Wilderness Association would like to thank you for this opportunity to respond to the proposed *Amended Recovery Strategy* released by Environment Canada on December 20, 2013.

Alberta Wilderness Association (AWA) works throughout Alberta towards more representative and connected protection of Alberta's unique and vital landscapes that are the source of our abundant clean water, clean air and vital habitat for wildlife in each one of our six natural regions. We have been working in Alberta for nearly fifty years, to raise the profile of Alberta's spectacular wilderness, and to help Albertans learn more about the value of our wilderness and wildlife, and participate in opportunities to protect and care for the legacy that we will leave for future generations. With over 7,000 members and supporters in Alberta and across Canada, AWA remains committed to assuring protection of wildlife and wild places in Alberta for all Canadians.

We are anxious that efforts to recover greater sage-grouse be acted upon swiftly and with the complete support and effort of your ministry with the full financial resources required. To date communication from your ministry about the plight of greater sage-grouse, the Emergency Order and the proposed *Amended Recovery Strategy* has in our opinion been less than what is needed. Meetings held have introduced fear and what we believe is unnecessary angst among the community of landowners, industry and conservationists who have the passion and tenacity to work with you to ensure our collective efforts to recover this iconic and vital part of our native biodiversity will be successful. AWA firmly believes our health and indeed our wealth is fully dependent on the protection and investment in our native species and biodiversity. For these reasons we are

sincerely disappointed and concerned with this much anticipated December 2013 proposed Amended Recovery Strategy for greater sage-grouse.

AWA has carefully reviewed the proposed *Amended Recovery Strategy* and has discussed the proposal at length with colleagues and scientific experts on greater sage-grouse. We have a number of specific items that we bring to your attention with this letter in hopes you and your ministry will revise the proposed *Amended Recovery Strategy* to include what scientists already know about greater sage-grouse and their habitat – the best available science – and take the necessary steps to implement vitally important measures immediately.

Accountability

AWA is particularly concerned that there is not enough accounting of measures introduced in earlier recovery strategies for the greater sage-grouse. We have not been provided in this strategy with what has or has not worked. We would like a section of the final *Amended Recovery Strategy* written to include this responsibility of your ministry to the public of Canada; one that describes efforts to this point and informs us about why recovery strategies written to date have not changed the trajectory of decline. These significant birds are on the brink of extirpation. This *Amended Recovery Strategy* needs to include evaluation measures that will ensure the public is informed of what your ministry has done and how those measures have influenced the successful recovery of greater sage-grouse in Canada. How often and when you will report to us about the success of the 2013 amended strategy and the prevention of the extirpation of greater sage-grouse in Canada is requested.

Lack of Urgency

The 2013 proposed *Amended Recovery Strategy* does not adequately reflect the urgency of the need to implement greater sage-grouse recovery actions on the ground immediately. The strategy calls for multi-species action plans to be "completed within 4 years of final posting of this Amended Recovery Strategy" (from the Executive Summary, p. iv). This means the plans may not be completed till 2017 (depending on how long it takes the proposed strategy to be finalized). **The fact that without dramatic changes to habitat loss and active habitat restoration, there will be no greater sage-grouse in Alberta or perhaps in Canada within 2 – 3 years is not recognized in this plan.** Given the rapid decline in the species' population, the proposed *Amended Recovery Strategy*'s timeline for action planning is inconsistent with the purposes of the Species at Risk Act.

On September 7-8, 2011, AWA hosted an *Emergency Sage-grouse Summit* in Calgary, which saw the participation of pre-eminent greater sage-grouse scientists from across North America. From that summit was issued a communiqué that concludes in part: "We are alarmed by unnecessary delays in the designation and protection of critical habitat when **there is unanimous agreement from industry and government that immediate action is required**"¹ (emphasis added). It is time to correct this problem.

Proposed Amended Recovery Strategy Population and Distribution Objectives

It is commendable that the 2013 proposed *Amended Recovery Strategy* includes clear and measurable population and distribution objectives. However, while the January 14, 2008 version of the *Recovery Strategy* called for at least 30 active leks in Saskatchewan in the long-term, the 2013 proposed *Amended Recovery Strategy* only calls for 20 active leks while maintaining the same population size objective of 1,500 adults.

¹ AWA et al. "Communiqué from the Emergency Sage-grouse Summit" (issued from the Emergency Sage-grouse Summit, Calgary, Alberta, September 7-8, 2011) [AWA et al. 2011], p. 1.

Nevertheless the survey data in the proposed *Amended Recovery Strategy* at page 48 show that when approximately 1,500 adults were counted (1,491 in 1987 and 1,779 in 1988) they were distributed among either 29 or 31 leks.

No scientific support is offered to support this decision, which we believe is not scientifically sound as it is not consistent with known greater sage-grouse population and distribution. We recommend that the population and distribution objective in this proposed *Amended Recovery Strategy*, of "20 or more active leks" for Saskatchewan, be changed to "30 or more active leks."

Equally concerning is the inexplicable and scientifically arbitrary basis of the population and distribution objective for Saskatchewan on what the proposed *Amended Recovery Strategy* states are incomplete survey data from 1987 and 1988. We recognize that this error was included in the 2008 *Recovery Strategy*. It should now be corrected. The proposed *Amended Recovery Strategy* states at page 14 that the 1987 and 1988 counts footnoted "a" in Appendix C are the basis for the Saskatchewan population and distribution objective and are "based on annual population estimates in [...] 1987 and 1988 in Saskatchewan." Footnote "a" of Appendix C explains that these counts are known to be incomplete and represent underestimates of the population size and number of leks in Saskatchewan at that time. The proposed *Amended Recovery Strategy* provides at footnote "b" of Appendix C what it states to be the most accurate and most current data from the province of Saskatchewan: a 1988 count of 42 active leks and an estimated population of at least 2,619 adult birds.

The population and distribution objective for Saskatchewan should therefore be revised to reflect the only population estimate believed to be accurate, 2,619 birds at 42 leks, which we note is consistent with the high end of the population estimate ranges for the incomplete 1987 and 1988 counts. There is no scientific explanation offered for not using the accurate numbers for the population and distribution objective for Saskatchewan; we believe no such scientific explanation exists. Should the Minister decide to maintain the current population and distribution objective, which we believe to be scientifically unsound and unsupportable, we suggest rewording the above quoted statement about its basis, which is highly misleading, to read: "based on annual population under-estimates known to be inaccurate in [...] 1987 and 1988 in Saskatchewan."

Threats to Greater Sage-grouse Survival

The Species at Risk Act (SARA) section 41(1)(b) requires that a recovery strategy identify threats to the species and its habitat consistent with information provided by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The 2008 COSEWIC Status Report for greater sage-grouse states in its reason for designation: "Causes for the decline [of greater sage-grouse] are largely due to the loss, fragmentation and degradation of its native grassland habitats through oil and gas exploration, overgrazing and conversion to crops."² The "Threats" section of the proposed *Amended Recovery Strategy* is not consistent with the information provided by COSEWIC in this most recent Status Report, just one example of its lack of consistency with the best available science on greater sage-grouse. No scientific justification is offered for departing from the scientific consensus on threats to greater sage-grouse.

Specifically, a review of the literature on threats to greater sage-grouse, including literature from the governments of Canada and Alberta, shows that the primary threat to greater sage-grouse survival and

² Canada. Environment Canada. COSEWIC Secretariat. *COSEWIC assessment and update status report on the Greater Sage-Grouse* Centrocercus urophasianus, Phaios *subspecies and* Urophasianus *subspecies*, Centrocercus urophasianus urophasianus, *in Canada*. [Ottawa], 2008. <u>http://www.sararegistry.gc.ca/status/status_e.cfm</u> [COSEWIC 2008], p. iii.

recovery in Canada is ongoing habitat loss, disturbance, and degradation as a result of oil and gas development and other industrial development.^{3,4} Habitat loss, fragmentation and degradation are a primary cause of declining greater sage-grouse populations range-wide.⁵ Oil and gas development has played a prominent role in the species' recent decline.⁶ A 2011 review of all fourteen existing credible scientific studies of the impact of oil and gas development on greater sage-grouse found that all of them reported negative impacts, and none reported positive impacts on greater sage-grouse populations or habitats. The six authors of this review, all respected greater sage-grouse experts, write that "findings to date suggest that impacts [of oil and gas development on greater sage-grouse] are universally negative and typically severe."⁷

Despite this body of evidence, the 2013 proposed *Amended Recovery Strategy* downplays habitat loss, degradation and disturbance as threats to greater sage-grouse, and instead implies that the primary cause is the weather. The 2008 version of the *Recovery Strategy* emphasized that "Sage-Grouse require large blocks of interconnected sagebrush habitats [...]. Habitat alteration that reduces patch size and removes or degrades the quality of sagebrush generally has negative consequences for all sagebrush obligates."⁸ In contrast, the 2013 proposed *Amended Recovery Strategy* lists threats (in order of concern), starting with drought, inclement weather, West Nile virus and noise (p. 6). There is no scientific support for the proposed *Amended Recovery Strategy*'s classification of habitat loss and degradation as of less concern than drought (which greater sage-grouse have lived with for thousands of years). There is no scientific support for listing "Habitat conversion to energy development infrastructure" and "Habitat loss or degradation from conversion to roads" as only of "medium" concern (p. 7) and this is directly contrary to the information provided by COSEWIC.

We are concerned that this re-evaluation of threats ends up focusing on symptoms of the problem rather than its root cause. Factors such as drought, weather and disease are only such significant threats to greater sagegrouse survival because population numbers are already so low. This in turn is a function of the true underlying threat, which has caused the decline in population seen to date, degradation and destruction of habitat. In the last 10 years the majority of this degradation and destruction of habitat has resulted from oil and gas development and operation of existing oil and gas infrastructure as reflected clearly in the COSEWIC Status Report. Elevating the importance of the previously listed threats over habitat conversion, loss and degradation is a fundamental transposition of the true situation and does not reflect the best available science. For this reason, AWA believes that **the identification of threats to greater sage-grouse survival in the 2013 proposed** *Amended Recovery Strategy* is inadequate and inconsistent with the requirements of SARA.

³ "Species Profile: Greater Sage-Grouse *urophasianus subspecies*," SARA Registry, Government of Canada, last modified December 5, 2013. <u>http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=305#limits</u> [SARA 2010].

⁴ M.J. Suitor, D. Eslinger, and J. Nicholson, "Northern sagebrush steppe Greater Sage-grouse recovery: proposal for translocating sagegrouse into silver sagebrush communities in Alberta for population augmentation" Alberta Sustainable Resource Development, 2010. (archived at Fish & Wildlife Division, Alberta Sustainable Resource Development) [Suitor et al. 2010], pp. 12 & 16.

⁵ C.L. Aldridge and M.S. Boyce, "Linking occurrence and Fitness to Persistence: Habitat-Based Approach for Endangered Greater Sagegrouse," *Ecological Applications* 17(2) (2007): 508-526 [Aldridge & Boyce 2007].

⁶ Suitor et al. 2010, p. 12.

⁷ D.E. Naugle, K. E. Doherty, B. L. Walker, H. E. Copeland, M. J. Holloran, and J. D. Tack, "Sage-grouse and cumulative impacts of energy development," in *Energy Development and Wildlife Conservation in Western North America*, ed: D. E. Naugle. (Washington, DC: Island Press, 2011) [Naugle et al. 2011], p. 56.

⁸ K. Lungle and S. Pruss, "Recovery Strategy for the Greater Sage-grouse (Centrocercus urophasianus urophasianus) in Canada," Species at Risk Act Recovery Strategy Series, [Ottawa]: Parks Canada Agency, 2008 [Lungle & Pruss 2008], p. 9.

The identification of threats to greater sage-grouse and its habitat in the proposed *Amended Recovery Strategy* should be changed to make it consistent both with the information provided by COSEWIC and with the scientific literature (examples cited above) on threats to the greater sage-grouse.

Voluntary versus Prescriptive Recovery Measures

We disagree with **the emphasis on voluntary over prescriptive recovery measures**. Section 6.2 of the proposed *Amended Recovery Strategy*, "Strategic Direction for Recovery," states as a management approach: "Further develop and implement habitat-protection, site-protection, stewardship, and management plans emphasizing voluntary, collaborative approaches that focus on results to be achieved, rather than prescriptive tools to be implemented" (p. 18). While voluntary and stewardship approaches have a role to play, given the imminent threats to the survival of greater sage-grouse in Canada we believe prescriptive tools are as important or more important and that the *Amended Recovery Strategy* should clearly state this.

Legal protection of critical habitat through effective protection under provincial law, or federal protection under the Emergency Order or a Safety Net Order, are effective tools to prevent or reduce damage to habitat and promote recovery of that habitat, and should be emphasized in the *Amended Recovery Strategy* as particularly important while the population is so tiny and vulnerable. The time to experiment with voluntary measures and lax provincial regulations as the primary protections for greater sage-grouse has passed. Indeed, that experiment has clearly been a failure; the effectiveness of lax provincial regulations and voluntary measures is evident in the dire condition of the greater sage-grouse population.

We are surprised and disturbed to find that the proposed *Amended Recovery Strategy* includes no mention of the need to assess effective protection of greater sage-grouse individuals or critical habitat under provincial laws, nor any guidance at all as to what would constitute effective protection under provincial law. The proposed *Amended Recovery Strategy* states at page 20:

Both Alberta and Saskatchewan have recently updated their land-use/activity restriction guidelines for Sage-Grouse habitat, and land-use activities should be monitored to ensure compliance with guidelines. Periodic evaluation of all disturbance-protection measures should be performed to keep up-to-date with ongoing research and new information (for example, see Section 7.3).⁹

This is the sole reference in the proposed *Amended Recovery Strategy* to provincial protection of greater sagegrouse and their critical habitat. The suggestion that the provinces should periodically evaluate their nonbinding guidelines to make sure they are up to date with current research is unacceptable. This section is so lacking in any acknowledgement of the condition of the Canadian greater sage-grouse population, or the demonstrable failure of provincial guidelines to prevent it from disappearing, that it appears not to have been written with SARA's purposes in mind. This section should be revised to include the rigour and sense of urgency appropriate to the emergency facing greater sage-grouse, and a fulsome discussion of the need to assess effective protection of greater sage-grouse and their critical habitat.

Critical Habitat

We are appreciative of the commitment shown in the proposed Amended *Recovery Strategy* to basing the identification of critical habitat on solid, established science. However we do take issue with the transparency of the process used to determine that habitat. For example, what data and research methods were used to

⁹ This Recovery Strategy does not include a Section 7.3.

determine or limit the current range of the greater sage-grouse (in terms of distance from known leks)? While that determination may have been made on very reasonable grounds, in the absence of full disclosure of that process it is hard to be fully confident that the proposed *Amended Recovery Strategy* has adequately identified or defined critical habitat. Thus while the proposed *Amended Recovery Strategy* recognizes 2,812 km² of year-round habitat, plus 12.5 km² of lek critical habitat, we have identified 2,947 km² of critical habitat based on the work of Dr. Cameron Aldridge (Colorado State University) and David Gummer (Parks Canada)¹⁰, as proposed in the 2011 *Communiqué from the Emergency Sage-grouse Summit* referenced above. Part of the difference between the two numbers is due to the discrepancy between lek radii used to determine current range. A more complete accounting of the rationale and scientific methods behind the Environment Canada numbers would make it easier to determine whether the 2,812 km² is appropriate.

On the topic of range, critical habitat maps (Figures 3 and 4, pp. 27-28) show "year-round critical habitat (for nesting, brood-rearing, and wintering life stages), within [...] **the recent range** of Sage-Grouse" (emphasis added). Since "recent range" is for the species after its having already declined by 98 percent, we do not see evidence that it will be sufficient to ensure the survival or recovery of greater sage-grouse in Canada. We see no scientific justification for waiting any longer to identify the *total* amount of critical habitat needed to ensure, at the least, a self-sustaining greater sage-grouse population in Canada.

A specific case in point relates to the 51 areas of lek critical habitat identified in the proposed *Amended Recovery Strategy* and designated as the Lek Critical Habitat (pp. 22-23). It is our understanding that these leks were selected based on occupancy by at least one male between 2000 and 2012, with the addition of several dormant leks that had been active in the 1980s and 1990s but not recently. Many of these dormant leks, especially in Saskatchewan, are consequently currently isolated from the remaining active greater sage-grouse range, with no connectivity between the two. It is likely that this lack of connectivity explains these leks' dormant status. While a small buffer zone (our understanding is that this is of 140 m radius but the proposed *Amended Recovery Strategy* is unclear on this and the associated methods) has been drawn around those leks to protect them from destruction, this does nothing to address the conservation of essential sagebrush habitat in the surrounding area that will be needed for nesting, brood-rearing and wintering, activities necessary to support recruitment of individuals to these leks, if they are ever to become re-activated.

We strongly support the identification of these dormant leks as critical habitat. However we believe that additional year-round critical habitat should be identified in this recovery strategy to provide the necessary connectivity with the remaining active greater sage-grouse range in order to enable reactivation of the dormant leks and supply all-season habitat for birds that can then support recruitment to these leks. In addition, the recovery strategy should identify all leks and sufficient all-season habitat to support a population target in Saskatchewan consistent with the accurate Saskatchewan survey results from 1988, as discussed above.

Well-established science regarding greater sage-grouse habitat needs indicates that connectivity between active leks and a sufficient supply of all-season habitat in the region is essential.¹¹ Population declines of greater sage-grouse are driven by reductions in habitat quality during the three critical life stages: nesting,

¹⁰ C.L. Aldridge and D.L. Gummer, "Lessons learned in the application of habitat models to identify critical habitat for Greater Sage-grouse" (presented at "Bridging the Science-Policy Gap in Implementation of Critical Habitat under the ESA and SARA," the Society for Conservation Biology's 24th International Congress for Conservation Biology, Edmonton, Alberta, July 3-7, 2010) [Aldridge & Gummer 2010].

¹¹ E.g.: Aldridge & Boyce 2007.

brood rearing, and wintering.¹² The loss and degradation of nesting and brood-rearing habitats leads to reduced nesting success and increased mortality.^{13,14} Loss and degradation of sagebrush habitat decreases the size of breeding populations and the persistence of leks.¹⁵ Extirpation of greater sage-grouse from local areas most often is the result of the combined effects of residing within 30 km of habitat fragmentation, and lack of sagebrush cover.¹⁶ Across the species' range, long-term persistence of greater sage-grouse requires landscapes to contain at least 25 percent sagebrush habitat and preferably 65 percent within an approximately 31 km radius of that population's location.¹⁷

In short, while the identified critical habitat is a good start, we do not believe it will be sufficient to achieve the stated population and distribution objectives of the proposed *Amended Recovery Strategy*. Additional critical habitat is needed; this can and should be identified now. In addition, the *Amended Recovery Strategy* should include a clear explanation of how the identified critical habitat reflects a precautionary approach, as required under section 38 of SARA, to achieve the strategy's population and distribution objectives.

Buffer Zones

In 2011 a 1,900 m protected Zone of Influence (buffer) around greater sage-grouse year-round habitat was recommended in the 2011 *Communiqué from the Emergency Sage-grouse Summit* as necessary to maintain the suitability of the all-season habitat for greater sage-grouse survival and recovery¹⁸ This buffer was derived from research done in Canada showing significant greater sage-grouse avoidance of disturbed habitat out to the distance of at least 1,900 m.¹⁹ This work built on earlier Canadian research showing the risk of brood failure is 1.5 times greater with each well site that is visible within 1 km of brood-rearing areas;²⁰ clearly the effects extend farther than 1 km.

Taken together these papers show that to maintain the capacity of year-round critical habitat to support greater sage-grouse life processes, *at minimum* a buffer of 1,900m is needed around every square metre of year-round critical habitat. Within this buffer critical habitat, as within the year-round critical habitat itself, the best available science shows that any disturbance, including modification of sagebrush habitats, additional development of roads, well-sites, power poles or fences, and impacts from operation and presence of existing infrastructure will directly degrade those lands currently identified as year-round critical habitat. Therefore buffer critical habitat must be managed to keep disturbance below greater sage-grouse thresholds of tolerance to prevent destruction of the year-round critical habitat. In most or all of greater sage-grouse critical habitat, including the buffer critical habitat, this threshold is already exceeded and restoration is urgently required.

¹² J. Carpenter, C.L. Aldridge, and M. Boyce, "Sage-grouse Habitat Selection During Winter in Alberta," *Journal of Wildlife Management* 74(8) (2010): 1806-1814 [Carpenter et al. 2010].

¹³ Aldridge & Boyce 2007.

¹⁴ Naugle et al. 2011.

¹⁵ B.L. Walker, D.E. Naugle, and K.E. Doherty, "Greater Sage-grouse Population Response to Energy Development and Habitat Loss," *Journal of Wildlife Management* 71(8) (2007): 2644-2654 [Walker et al. 2007], p. 2645.

¹⁶ C.L. Aldridge et al., "Range-wide patterns of greater Sage-grouse persistence," *Diversity and Distributions* 14 (2008): 983-994 [Aldridge et al. 2008].

¹⁷ Aldridge et al. 2008, p. 990.

¹⁸ AWA et al. 2011, p. 2.

¹⁹ Carpenter et al. 2010.

²⁰ Aldridge & Boyce 2007, p. 522.

Buffers of 1.9 km around year-round critical habitat are a very conservative approach; studies from the United States show that much wider buffers are needed.^{21,22} Studies done in the northern United States using trends from lek counts showed significant population decreases in populations associated with leks up to 15 km from oil and gas developments.²³ Another recent study showed negative effects on population trends and population size result from energy development up to 12.3 km to 18 km from leks.²⁴

A larger radius needs to be drawn around leks when defining lek critical habitat. To prevent greater sagegrouse from avoiding or abandoning leks, it has been shown that, at a *minimum*, energy development should be prohibited within 5 kilometres of active leks.²⁵ More recent research indicates that energy development within 6 kilometres of leks often results in complete abandonment of those leks.^{26,27} A thorough statistical analysis of impacts of energy development on leks found negative impacts on leks 6.4 kilometres from development.²⁸

In light of these findings, we do not consider it adequate to characterize the destruction of critical habitat as being likely to occur as a result only of structures over 1.2 m in height up to 1.0 km away, and over 10 m in height between 1.0 km and 3.2 km away (p. 31 of the proposed *Amended Recovery Strategy*). Similarly in our view the proposed *Amended Recovery Strategy* falls short by failing to identify any buffer at all for removal, reduction or degradation of sagebrush grassland habitat (p. 29 of the proposed *Amended Recovery Strategy*).²⁹ These narrow buffers from identified habitat are inconsistent with the best available science, which shows that any development, including roads, well pads, fences and power lines, in or within 1,900 metres of greater sage-grouse habitat, will degrade or destroy the habitat's suitability for greater sage-grouse.

Recommendations for use of buffers on critical habitat:

The best available science makes clear that any changes to sagebrush habitat or increases in anthropogenic features within 1.9 km of year-round critical habitat will ultimately destroy that year-round critical habitat.³⁰ The models developed by Aldridge and Gummer and directly used by Environment Canada to identify year-round critical habitat rely on statistical relationships that include and require that 1.9km buffer.³¹ Without the 1.9km buffer, the year-round critical habitat identified in the proposed *Amended Recovery Strategy* is insufficient to be considered critical habitat based on the best available science. The proposed *Amended Recovery Strategy*'s current identification of year-round critical habitat represents a misuse and misinterpretation of the results of the Aldridge and Gummer models.

- ²⁸ Walker et al. 2007.
- ²⁹ E.g.: Aldridge & Boyce 2007.
- ³⁰ Aldridge & Boyce 2007.

²¹ E.g.: K. Doherty, "Sage-grouse and energy development: integrating science with conservation planning to reduce impacts" (PhD diss., University of Montana, 2008) [Doherty 2008], p. 9.

²² K, Doherty, D.E. Naugle, B.L. Walker, and J.M. Graham. "Greater Sage-Grouse Winter Habitat Selection and Energy Development." Journal of Wildlife Management, 72(1) (2008): 187-195 [Doherty et al. 2008], p. 194.

 ²³ R.L. Taylor, J.D. Tack, D.E. Naugle, and L.S. Mills, "Combined Effects of Energy Development and Disease on Greater Sage-Grouse,"
PLoS ONE 8(8) (2013), doi:10.1371/journal.pone.0071256 [Taylor et al. 2013].

²⁴ Naugle et al. 2011.

²⁵ M. Holloran, "Greater Sage-grouse (*Centrocercus urophasianus*) Population Response to Natural Gas Field Development in Western Wyoming" (PhD diss., University of Wyoming, 2005) [Holloran 2005].

²⁶ Tack 2006.

²⁷ Naugle et al. 2011.

³¹ Aldridge & Gummer 2010.

To be scientifically sound, any critical habitat designation based on these models must include buffers that restrict changes in habitat or developments within 1.9 km of all year-round critical habitat. We thus strongly recommend that all year-round critical habitat currently identified in the proposed *Amended Recovery Strategy* be buffered by a radius of 1.9 km and that habitat within this buffer be identified as buffer critical habitat for greater sage-grouse. Similarly, we recommend habitat within 6.4 km of all leks be included in the lek critical habitat where it is not already identified as year-round critical habitat.^{32,33,34,35}

These recommendations follow from the definitions in section 2(1) of SARA of "critical habitat" and "habitat" (which includes areas that a listed species depends on directly **or indirectly** in order to carry out its life processes) and the requirement in section 41(1)(c) of SARA to identify critical habitat to the extent possible, based on the best available [scientific and ATK] information. In our opinion, the current identification of critical habitat in the proposed *Amended Recovery Strategy* does not meet SARA's requirements nor the needs of greater sage-grouse for survival or recovery.

We further recommend that the attributes of the critical habitat (including buffer critical habitat) be described in terms of greater sage-grouse thresholds of tolerance for density and proximity of disturbance including noise, development and operation of structures, sagebrush grassland habitat degradation and other human disturbance based on the published literature. This will be particularly crucial if the critical habitat is not revised to include buffer habitat, though to be clear we believe that making that revision is necessary for greater sage-grouse survival and to address SARA's requirements.

Finally, we recommend that the list of activities likely to result in destruction of critical habitat be revised to reflect the best available science on greater sage-grouse by identifying zones of Influence for potentially destructive activities consistent with our recommendations above of 1.9 km from year-round critical habitat and 6.4 km from lek critical habitat. If the critical habitat designation is revised as we recommend to include appropriate buffers then the activities likely to result in destruction of critical habitat could more simply be described as any activity of a potentially destructive nature occurring anywhere within critical habitat. In our opinion, this would provide greater clarity and regulatory certainty to industry and landowners, which would in turn improve protection for the greater sage-grouse.

"Seasonally" Harmful Activities

In the proposed *Amended Recovery Strategy*'s list of activities likely to result in destruction of critical habitat, activities other than installing or constructing new infrastructure and causing loud noises are only described as destructive to leks during mating season (April 1 through May 30) and only during leking hours (from 1.5 hours before sunset through 1.5 hours after sunrise). However, restricting activities only during the mating season and leking hours will not adequately prevent destruction of critical habitat. Noise restrictions should be applied during all hours and to year-round as well as lek critical habitat from the onset of leking to the end of brood-rearing, to mitigate the effects of noise and visual disturbance. Studies have found avoidance of "visible" wells and the resulting conclusion based on this and a review of research on greater sage-grouse in other areas indicates that the avoidance is likely related to a suite of many effects of the wells, including noise, activity, or

³² Aldridge & Boyce 2007, p. 523.

³³ Carpenter et al. 2010, p. 1813.

³⁴ Holloran 2005, p. 58.

³⁵ Walker et al. 2007, p. 2653.

visibility to predators perching on wells or power lines.³⁶ Given these demonstrated effects of disturbance, we believe the timing of the current noise restrictions is inadequate.

Inadequacy of the level of ambition in the Proposed Amended Recovery Strategy

AWA has serious misgivings about the overall **lack of ambition in the 2013 proposed** *Amended Recovery Strategy*. In our opinion the strategies, approaches and actions outlined in the proposed *Amended Recovery Strategy* are insufficient to ensure greater sage-grouse survival in Canada. The proposed *Amended Recovery Strategy* correctly asserts that "There is sufficient habitat available to support Sage-Grouse populations, particularly if land management initiatives favourable to Sage-Grouse are implemented" (from the Recovery Feasibility Summary, p. v). Yet the proposed *Amended Recovery Strategy* is not designed to ensure this occurs or even to make it likely to occur.

In many places the 2013 proposed *Amended Recovery Strategy* is much weaker than the September 25, 2013 *Alberta Greater Sage-Grouse Recovery Plan 2013-2018*; for example that document includes the statement that "Further loss of habitat and individuals due to anthropogenic developments is unacceptable and preventable."³⁷ The federal *Amended Recovery Strategy* should do the same, and call for no new industrial activity in greater sage-grouse critical habitat.

The Alberta *Recovery Plan* has goals to "Restore, and prevent further loss of, identified critical habitat in [...] Alberta" and to "Increase suitable habitat available for greater sage-grouse through accelerated reclamation of industrial developments and restoration of marginal croplands."³⁸ In contrast the federal proposed *Amended Recovery Strategy* states: "If possible, protocols for habitat reclamation in areas with existing developments that are otherwise suitable for Sage-Grouse can be explored..." (p. 20). The proposed *Amended Recovery Strategy* instead focuses on managing impacts only in the two percent of greater sage-grouse habitat that is currently occupied. This is inconsistent with sound science and very unlikely to lead to greater sage-grouse survival in Canada. AWA strongly believes that in order to allow for future survival let alone recovery of greater sage-grouse, previously occupied range outside current critical habitat must be restored to functionality suitable for greater sage-grouse. This is consistent with sound science and the goals of the Alberta *Recovery Plan*.

It is all the more important that the federal *Amended Recovery Strategy* supports the Alberta *Recovery Plan's* goals and sets a precautionary and scientifically sound basis for greater sage-grouse management because the provincial document is not legally binding. Further, Alberta currently lacks provincial species at risk legislation or other effective legal protection for greater sage-grouse. The Alberta *Recovery Plan* will have little effect unless its laudable goals are backed up by a strong final *Amended Recovery Strategy* and a clear federal expectation that Alberta will effectively protect greater sage-grouse and its critical habitat under provincial law.

Section 6 from the proposed *Amended Recovery Strategy*, "Broad Strategies and General Approaches to Meet Objectives," includes the strategy: "Develop and implement protocols for reclamation of areas with existing developments in habitats that could otherwise meet requirements for use by Sage-Grouse" (p. 18). Given the

³⁶ Aldridge & Boyce 2007, p. 510.

³⁷ Alberta. Environment and Sustainable Resource Development. *Alberta Greater Sage-grouse Recovery Plan 2013-2018*, Alberta Species at Risk Recovery Plan 30: 2013 <u>http://esrd.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/default.aspx</u> [ESRD 2013], p. 22.

³⁸ ESRD 2013, pp. vii-viii.

likelihood greater sage-grouse will not survive without significant habitat reclamation this should be a (very) **High** priority rather than **Medium** as it is currently assigned.

The approaches to meeting objectives in the federal proposed *Amended Recovery Strategy* also fail to address connectivity. While the 2008 *Recovery Strategy* included an objective of "ensuring habitat connectivity to preserve gene flow"³⁹ the 2013 proposed *Amended Recovery Strategy* does not mention it. This objective should be included in the Amended Recovery Strategy, and critical habitat identification and protection should be revised to accomplish it.

Consistent with all of our comments above, the *Amended Recovery Strategy* should explicitly restrict all further development in habitat identified as year-round critical habitat in the proposed *Amended Recovery Strategy* and within 1.9 km of that habitat until the greater sage-grouse population is self-sustaining and stable at target population levels. It currently fails to do this. Comparing again to the Alberta *Recovery Plan* we see that the provincial strategy notes that "Reclamation of inactive industrial developments can restore these areas for potential use by sage-grouse. Reductions in infrastructure associated with active developments (e.g., burying power lines) may reduce the impact of infrastructure on sage-grouse."⁴⁰ The federal proposed *Amended Recovery Strategy* should include provisions to address this.

Lack of details on financial support for implementation

Environment Canada's "What we Heard About the Amended Recovery Strategy for the Greater Sage-Grouse in Canada" document says that "It is unfair to burden local people with the socio-economic consequences of implementing this strategy." Yet the strategy gives no indication of where funding support will come from to ensure that unfair burden does not occur. Additionally, landowners with degraded habitat and no greater sage-grouse may receive substantial royalties for oil and gas access, whereas landowners who have done their best for decades to manage habitat suitably for greater sage-grouse receive nothing. There is thus no financial incentive to do the right thing, in fact quite the opposite holds and this shortfall in the proposed Amended Recovery Strategy must be addressed. We also note that there is no indication if there is a plan that industry will be compensated for reduced activity.

The recovery of greater sage-grouse is as much a political and economic issue as it is a biological problem. AWA believes that if we don't focus on the political and economic situation, we won't get the biological situation right for the species. It is important that people be dealt with transparently and fairly. This means that resources to address real concerns be made available for the proposed *Amended Recovery Strategy* to proceed. In our estimate this is in the tens of millions of dollars per year over the next 5 years. Previous plans have failed because of the lack of financial and political commitments. This proposed *Amended Recovery Strategy* is destined to repeat that failed history if we don't commit to it and resource it properly.

Please know that our comments and careful review are based in our passion and concern for the legacy of wilderness and wildlife that we will leave for future generations and on our understanding of the best available science relevant to greater sage-grouse survival and recovery. We look forward to opportunities to work with you and your staff as we continue to develop the *Sage-grouse Partnership* we initiated in March of 2013. The goals of that partnership include building relationships among ranchers, farmers, oil and gas industry, government and conservationists and the scientific community, working for the recovery of greater sage-

³⁹ Lungle & Pruss 2008, p. v.

⁴⁰ ESRD 2013, pp. 21-22.

grouse on our landscape and all the associated benefits. We look forward to your response and a revised *Amended Recovery Strategy* in the very near future.

Respectfully submitted, ALBERTA WILDERNESS ASSOCIATION

Christipan Obon

Christyann Olson Executive Director



cc: Honourable Minister Robin Campbell, ESRD Alberta robin.campbell@gov.ab.ca

Attachments:

- 1. AWA et al. "Communiqué from the Emergency Sage-grouse Summit" (issued from the Emergency Sage-grouse Summit, Calgary, Alberta, September 7-8, 2011).
- 2. Canada. Environment Canada. COSEWIC Secretariat. COSEWIC assessment and update status report on the Greater Sage-Grouse Centrocercus urophasianus, Phaios subspecies and Urophasianus subspecies, Centrocercus urophasianus urophasianus, in Canada. [Ottawa], 2008.
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- 4. M.J. Suitor, D. Eslinger, and J. Nicholson, "Northern sagebrush steppe Greater Sage-grouse recovery: proposal for translocating sage-grouse into silver sagebrush communities in Alberta for population augmentation" Alberta Sustainable Resource Development, 2010. (archived at Fish & Wildlife Division, Alberta Sustainable Resource Development)
- 5. C.L. Aldridge and M.S. Boyce, "Linking occurrence and Fitness to Persistence: Habitat-Based Approach for Endangered Greater Sage-grouse," *Ecological Applications* 17(2) (2007): 508-526.
- 6. D.E. Naugle, K. E. Doherty, B. L. Walker, H. E. Copeland, M. J. Holloran, and J. D. Tack, "Sage-grouse and cumulative impacts of energy development," in *Energy Development and Wildlife Conservation in Western North America*, ed: D. E. Naugle. (Washington, DC: Island Press, 2011)
- 7. K. Lungle and S. Pruss, "Recovery Strategy for the Greater Sage-grouse (Centrocercus urophasianus urophasianus) in Canada," Species at Risk Act Recovery Strategy Series, [Ottawa]: Parks Canada Agency, 2008.
- C.L. Aldridge and D.L. Gummer, "Lessons learned in the application of habitat models to identify critical habitat for Greater Sage-grouse" (presented at "Bridging the Science-Policy Gap in Implementation of Critical Habitat under the ESA and SARA," the Society for Conservation Biology's 24th International Congress for Conservation Biology, Edmonton, Alberta, July 3-7, 2010)

- 9. J. Carpenter, C.L. Aldridge, and M. Boyce, "Sage-grouse Habitat Selection During Winter in Alberta," *Journal of Wildlife Management* 74(8) (2010): 1806-1814.
- 10. B.L. Walker, D.E. Naugle, and K.E. Doherty, "Greater Sage-grouse Population Response to Energy Development and Habitat Loss," *Journal of Wildlife Management* 71(8) (2007): 2644-2654.
- 11. C.L. Aldridge et al., "Range-wide patterns of greater Sage-grouse persistence," *Diversity and Distributions* 14 (2008): 983-994.
- 12. K. Doherty, "Sage-grouse and energy development: integrating science with conservation planning to reduce impacts" (PhD diss., University of Montana, 2008)
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- 14. R.L. Taylor, J.D. Tack, D.E. Naugle, and L.S. Mills, "Combined Effects of Energy Development and Disease on Greater Sage-Grouse," *PLoS ONE* 8(8) (2013), doi:10.1371/journal.pone.0071256
- 15. M. Holloran, "Greater Sage-grouse (*Centrocercus urophasianus*) Population Response to Natural Gas Field Development in Western Wyoming" (PhD diss., University of Wyoming, 2005)
- 16. Alberta. Environment and Sustainable Resource Development. *Alberta Greater Sage-grouse Recovery Plan 2013-2018,* Alberta Species at Risk Recovery Plan 30: 2013.
- 17. Canada. Environment Canada. "What We Heard About the Amended Recovery Strategy for the Greater Sage-Grouse in Canada," December 20, 2013.