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Subject: GRSG 2015 Agriculture Conversion Chapter comments from WA
Date: Thursday, January 29, 2015 4:59:02 PM
Attachments: [GRSG Chapter comments.pdf](#)

Attached are comments pertaining to Washington state on the Agricultural Conversion chapter. Commenters included Jessica Gonzales (CWFO), Heather McPherron (CWFO), and Michelle Eames (EWFO)

Data below has been requested from NRCS and FSA and will be provided when it is received (Heather is the contact for this assignment):

- Number of expiring CRP acres in 2013 that were enrolled in SAFE to protect shrub-steppe habitat.
- CRP acres (by county) within the PACs that are currently enrolled
- Of the above, CRP acres anticipated to have mid-contract maintenance within the next 10 years
- CRP acres (by county) within the PACs that are anticipated to expire within the next 10 years
- SAFE acres (by county) within the PACs that are currently enrolled
- Of the above, SAFE acres anticipated to have mid-contract maintenance within the next 10 years
- SAFE acres (by county) within the PACs that are anticipated to expire within the next 10 years

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# United States Department of the Interior

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January 29, 2015

## Memorandum

To: Greater Sage-Grouse Status Review Team  
(Attn: Joy Gober)

From: Manager, Washington Fish and Wildlife Office

Subject: Greater Sage-grouse Status Review: Comments Regarding Chapter 27: Agricultural Conversion

The U.S. Fish and Wildlife Service (Service) has reviewed Chapter 27: Agricultural Conversion written by Joy Gober, for the Greater Sage-Grouse 2015 Status Review. The following comments are provided for inclusion in the Service's response to Chapter 27 of the GRSG 2015 Status Review.

### General

In general, the Columbia Basin does not conform to range wide generalities about agriculture conversion. The Moses Coulee and Crab Creek populations, in general, are highly fragmented landscapes with agriculture occurring as part of the shrub-steppe landscape matrix in many areas. Therefore, these populations of sage-grouse are in close proximity to agriculture activities. It may be worth calling out some of the differences in greater detail.

### Specific Comments

#### THREAT DESCRIPTION

[Page 2, Paragraph 1] *Indirect effects from agricultural conversion may include increased exposure to predation, West Nile virus (WNV), and pesticides (Connelly et al. 2004, p. 7-23; Walker 2008, p. 184).*

Suggest including infrastructure, fences, and invasive species as indirect effects.

#### Current Sources

[Page 3, Paragraph 1] *Agriculture is the dominant land cover within potential sagebrush habitat in Washington (42 percent) and Idaho (19 percent) (Miller et al. 2011, p. 156).*

Suggest rewording for clarity: Within the historical range of sage-grouse in Washington, 42% of the area is dominated by agriculture (Schroeder et al. 2000).

[Page 3, Paragraph 1] *A total of more than 230,000 km<sup>2</sup> (88,780 mi<sup>2</sup>), 11 percent of the sage-grouse's historical range (buffered by 50 km (31 mi)), was converted to agricultural lands (Knick et al. 2011, p. 208).*

Suggest explaining the 50-km buffer.

[Page 3, Paragraph 1] *In addition, the creation of reservoirs for irrigation, hydroelectric power, flood control, and other purposes has inundated riparian habitat used during brood-rearing (Braun 1998, p. 144).*

Suggest discussing the potential for the associated irrigation and water structures to attract predators which influence sage-grouse survival.

## CURRENT IMPACTS

### Results of Impact

[Page 5, Results of Impact Section] Agricultural use impacts in Washington have been both negative and positive.

Suggest that this chapter include discussion to address the following:

Agricultural conversion was listed as a threat for the Moses Coulee and Crab Creek Populations in Washington. However, "Nearly all of the conversion of shrub-steppe habitat to dryland farming occurred prior to 1940." (Washington Department of Fish and Wildlife (WDFW) Greater Sage-grouse Recovery Plan, page 24 [Stinson et al. 2004]). This statement is consistent with the range wide description; however, recent impacts of agricultural conversion are not described well in the draft chapter. Page 25, Table 7, in the WDFW Greater Sage-grouse Recovery Plan shows acres of existing cover type in current and historical sage-grouse range in Washington. Also Schroeder et al. 2000 is cited. Future conversion to agriculture is expected to not change significantly because most suitable farming habitat for these two populations has already been converted.

[Page 5, Bulleted Section] Include Washington Study

Suggested bullet: In Washington, establishment of the Conservation Reserve Program (CRP) on approximately 17% of former sage-grouse habitat, resulted in population growth as compared to the decline observed in populations with less than 2% CRP enrollment (Schroeder and Vander Hagen 2011). Some CRP farming activities move farmed land back towards shrub steppe habitat over the long term. As agricultural lands are converted back to native habitats, the population responds with positive growth trends in the long term.

[Page 6, first paragraph] In Washington, sage grouse will use human-modified habitats such as CRP for nesting, brooding, and wintering. CRP is technically a cropped land use. They will also use dryland wheat/grain fields or fallow fields for leks, and forage in canola fields for their increased association with invertebrate food sources. These activities contradict the clause in the second sentence. CRP is discussed later in the chapter, but should be briefly noted here.

[Page 7, last sentence in Paragraph 1] *The use of irrigated cropland and pasture may not be beneficial to sage-grouse if it increases exposure to pesticides (Blus et al. 1989, pp. 1141–1142) or WNV (Walker 2008, p. 184).*

Suggest including risk of exposure and death associated with farming machinery, fence collision, and increased predator exposure.

#### Timing

[Page 7, Paragraph 2] In areas of Washington where shrub steppe and agriculture fields are part of the greater matrix of habitat, sage-grouse can use agriculture fields for brood-rearing, cover, and foraging. This leads to additional concerns about haying or mowing activities occurring in the spring which can lead to brood and hen mortality. Suggest possible inclusion of this kind of timing related effect.

#### Compounded Effects

[Page 12] Suggest including paragraphs on the compounding effects from infrastructure, fences, and invasive plants.

### PROJECTED FUTURE IMPACTS

#### Foreseeable Future—definition and rational

#### Likelihood of Future Impacts

[Page 14, Paragraph 2, bulleted section] Suggest adding the Moses Coulee (Douglas County) and Crab Creek (Lincoln County) Populations with a localized caveat that addresses the following two factors:

- (1) The predictions about future decrease in agricultural conversion assumes that similar acreage amounts of CRP land will remain after many of the existing contracts expire, if this does not occur, then the populations will be at high risk from future agricultural conversion.

#### Rationale:

- In 2002, 550,085 acres of agricultural land in Douglas County decreased to 539,531 acres (2007 [from USDA, NASS, and Agriculture Censuses data]). These figures were used in the Washington Ground Squirrel listing determination that is not yet final. Farm Services Agency confirmed that, at least for Douglas County, agricultural conversion has decreased and will likely remain stable in the near future.
- (2) Moses Coulee and Crab Creek Populations may also be at risk from additional agricultural conversion, crop enhancement and maintenance of CRP is considered as agricultural conversion events. Rationale:
  - In Douglas County within the Moses Coulee Population, 75% (47,250 acres) of 63,000 acres of State Acres for Wildlife Enhancement (SAFE) were enhanced in 2010-2011 (8.7% of 539,531 acres of total agricultural area). This enhancement entailed mowing sagebrush to several inches high and preparing the ground for grass seeding. This activity sets back the height and growth of sagebrush, but improves the understory composition of native grass and forb species long term. These agricultural activities occur outside the nesting season, but initially resulted in population

decreases (possibly associated with removing good nesting habitat and prompting sage-grouse to move to new areas where they were not accounted for by subsequent lek counts).

- In 2017-2018, these same acres will be maintained per contract requirements, unless the maintenance is waived on a case-by-case basis. The maintenance activities include mowing, spot spraying of non-desirable vegetation, harrowing, and inter-seeding.

#### Anticipated Changes from Present

[Page 17, Table] *The threat is currently widespread and will remain so, but is not expected to increase.* The threat is not currently widespread and is not increasing as the table states, but should be clarified in the discussion presented above about CRP lands remaining as shrub-steppe and that maintenance on existing SAFE and newly enrolled CRP does not alter the habitat to a state that is not suitable for nesting. Additional rationale:

- One or more of the populations may experience an increase in agriculture conversion due to expiring CRP contracts returning to cropped land and mid-contract maintenance practices. Some portion of enrolled CRP acres (approximately 120,000 acres in Douglas County) will be maintained in the future as well. [We are checking for more specific information from NRCS and will provide it at a later date.]
- In 2017-2018, it is anticipated that 47,250 acres of SAFE acres in the Moses Coulee Population will be due for maintenance agricultural activities. This is the same 47,250 acres seeded in 2010 and 2011.
- The same general agricultural conversion conditions apply to the Crab Creek Population. Farmed land decreased from 854,791 acres in 2002 to 743,236 acres in 2007 (from USDA, NASS, Agriculture Censuses data).

#### THREAT AMELIORATION

Active Conservation [Page 19, 2nd paragraph] Currently, there are no conservation easements for sage-grouse habitat in Washington.

Actions and Effectiveness [Page 20, 1st paragraph] In Washington, current acre figures for CRP have increased due to an increase in the allowable state cap by county. We have requested current figures from NRCS. Also, in 2013 many acres of expiring CRP were enrolled in SAFE to maintain habitat that had matured. We are verifying these acres with NRCS and will provide them as soon as possible.

#### ASSESSMENT OF POTENTIAL THREAT

[Page 22, Last sentence] Suggest adding the Moses Coulee and Crab Creek populations, but clarifying that their risk is largely due to small population size at this point in time and not solely from the effects of recent or projected agricultural conversion.

We appreciate the opportunity to assist in the Greater Sage-Grouse 2015 Status Review. Questions and comments should be directed to Jessica Gonzales at the Service's Central Washington Field Office at (509) 665-3508, extension 2000 or by e-mail at: Jessica\_Gonzales@fws.gov.

#### LITERATURE CITED

- Schroeder, M. A., D. W. Hays, M. F. Livingston, L. E. Stream, J. E. Jacobson, and D. J. Pierce. 2000. Changes in the distribution and abundance of sage grouse in Washington. *Northwestern Naturalist* 81:104-112.
- Schroeder, M.A. and W.M. Vander Haegen. 2011. Chapter twenty-two, Response of greater sage-grouse to the Conservation Reserve Program in Washington State. In Greater sage-grouse: ecology and conservation of a landscape species and its habitats. S.T. Knick and J.W. Connelly, editors. *Studies in Avian Biology*. Volume 38:517-529.
- Stinson, D.W., D.W. Hays, M.A. Schroeder. 2004. Washington State Recovery Plan for the Greater Sage-grouse. Washington Department of Fish and Wildlife, Olympia, Washington. 109 pages.