From: Galst, Carey
To: Pat Deibert
Subject: Fwd: GRSG 2015 Fences chapter is available for review
Date: Monday, March 30, 2015 12:58:02 PM

Hi Pat-
It would be nice to also discuss this response from the FO biologist...we need to be able to make some conclusions - having the detail of information that is referred to below is likely never going to happen but yet we are still required to make a call on the threat and it's impact to the species and level of severity and imminence.
Talk to you tomorrow,
Carey

---------- Forwarded message ----------
From: **Siani, Jennifer** <jennifer_siani@fws.gov>
Date: Tue, Mar 24, 2015 at 8:08 PM
Subject: Re: GRSG 2015 Fences chapter is available for review
To: "Galst, Carey" <carey_galst@fws.gov>
Cc: "Nicholas, Amy" <amy_nicholas@fws.gov>, Kate Norman <kate_norman@fws.gov>

Carey,

Thank you for providing comments on the Fences chapter. I have provided responses below. If you have any further thoughts or questions, please do not hesitate to contact me.

- In the threat description there is reference to LPC - why? It is not explained - should we draw equal comparisons to LPC as GRSG? And what about the ptarmigan? Same family - so say that is why we are referencing them.

ANSWER: I structured the threat description section to go from a broad scale, looking at tetraonids, and then going to a finer scale, looking specifically at sage-grouse. In paragraph one sentence two, I define tetraonids as upland game birds in the genus Tetrao. I have modified this to be more accurate. It now says: upland game birds in the family Phasianidae, subfamily Tetraoninae, which includes grouse, ptarmigans and prairie chickens.

- How much of an extent of the range is likely fenced? How much of the important habitat has fences that are likely impacting the bird? We say what we said in 2010 but do we have any additional information

from since then?

ANSWER: We do not know the extent of the sage-grouse range that is fenced and we do not know how much of the “important” habitat has fences that are likely impacting the bird. The fence collision model created by Bryan Stevens will help identify areas that are considered high risk based on broad-scale topography and lek data current through 2007. This model is our best estimate of where high risk areas exist, but the model has limitations. The conceptual part of the model is based on data from only four areas in central Idaho and only on information compiled during the lekking season. We know that sage-grouse fence collisions are highly variable both within and between regions. The 2010 finding had only four paragraphs devoted specifically to fences so I have included a great deal more information than was provided then. For instance, all of the work done by Stevens came out after the 2010 finding. I am not sure what type of additional information you are looking for specifically. If it is empirical data, then I do not think we have it. In fact, I didn’t even get anything from the CED on fences. When I asked about it, I was told that it had all been grouped under infrastructure.

- The summarization of the threat does not give an idea of how we know that the fence impact will continue - and at what level? What is the level of this threat? Having management zone level impacts or just individuals and maybe population level impacts but not scaling up to the species level? What severity/immediacy is this threat having on the species as a whole?

ANSWER: Right now, we do not have baseline data that tells us what the specific level of impact from fences is on sage-grouse management zones or populations. Therefore, I cannot predict what the level will be in the future. However, I can say without any doubt that fences are a source of mortality to sage-grouse and that we will not be able to eliminate that source of mortality as long as fences exist on the landscape even with fence marking to reduce collisions. For example, >40 sage-grouse fence strikes were documented in a wintering area more than a mile from a lek on a fence that was already marked. The threat description illustrated that grouse are inherently susceptible to collision due to their biological structure and behavior. It would be unreasonable to assume that either of those things will change substantially in the near future. It would also be unreasonable to assume that people will stop building fences. We have evidence that we can reduce the levels of mortality by marking fences and keeping them away from leks, but we know grouse still collide with marked

fences and that these studies are in their infancy. We also have no studies looking at indirect effects of fences on sage-grouse survival or reproduction. We cannot define the severity/immediacy of this threat for three main reasons: (a) we do not know the proportion of males versus females killed or injured by fences, (b) we do not know if sage-grouse reproduction rates exceed mortality caused by fences currently or if they will in the future, and (c) we do not know the distribution of mortality across the species' range.

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Jennifer Siani, PhD
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On Fri, Mar 13, 2015 at 6:36 AM, Galst, Carey <carey_galst@fws.gov> wrote:
> Here are a few comments on the Fences chapter.
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><> <> <> <> <> <> <> <> <> <>
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> On Mon, Mar 9, 2015 at 11:13 AM, Nicholas, Amy <amy_nicholas@fws.gov> wrote:
>>
>> The Fences chapter is available for review, link below. Jennifer Siani is
>> the author. If you have particular interest in reviewing this chapter please
>> have comments back to me no later than March 16.
>>
>> 20150306_Fences_PMExp_Rv
>> GRSG2015_CommentMemo_Template
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>> Again, at this stage we are asking review for logic and clarity of
>> argument. We are asking for your questions or comments to be included in a
>> memo not track changes. We will have others doing technical edits at a later
>> time.
>>
>> We do not expect all project leaders to review every chapter. However, I
>> will be sending out a similar FYI for each chapter as it becomes available.
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