

## Melissa Schmit

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**From:** Gates, Natalie <natalie\_gates@fws.gov>  
**Sent:** Thursday, May 25, 2017 7:11 AM  
**To:** Joyce Pickle  
**Cc:** Kempema, Silka; Mueller, Connie; Melissa Schmit; Jennifer Stucker  
**Subject:** Re: [REDACTED] and Crocker grassland bird survey maps  
**Attachments:** Shaffer and Buhl 2015 - effects of wind energy on grassland birds.pdf

Has Geronimo been considering/calculating the indirect impacts of migratory bird avoidance at Crocker and [REDACTED] and made plans to compensate for those impacts?

Some grassland nesting species avoid turbines out to 300 m, and the avoidance problem increases over time (see attached paper). There is a similar effect with wetlands and avoidance by waterfowl. I'm sure you have already found some of these species, and will observe them again during these upcoming surveys.

We recommend habitat offsets to mitigate the avoidance effect. The authors of the attached study have been working to establish a compensation rate for the 70-acre circle around a turbine where avoidance occurs.

I will check with some folks and get back to you with more information about determining the appropriate level of compensation

Ducks Unlimited in Bismarck, North Dakota, sells easements and has worked with other wind companies on these offsets. You might approach them (Randy Renner may be the right person), or perhaps another conservation entity (e.g. The Nature Conservancy? others?) who may be able to assist with efforts to preserve or restore habitats to offset the impacts of Crocker and [REDACTED]. Purchase of easements is not necessarily the only means to do this.

As you know, we recommend avoidance first -

no turbines in grasslands, establishing maximum setbacks from wetlands, and/or avoiding siting turbines between wetlands. Preconstruction surveys and data collected are intended to be used to work

out  
such  
avoidance measures.

But if valuable habitats will not be avoided, we suggest this voluntary compensation.

-Natalie

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On Wed, May 24, 2017 at 1:25 PM, Joyce Pickle <[jpickle@west-inc.com](mailto:jpickle@west-inc.com)> wrote:

Hello Natalie, Silka and Connie -

we wanted to provide you with maps showing our planned locations of grassland breeding bird surveys at Crocker and [REDACTED]. These will follow the protocol that are in the Study Plan and per our discussion in the April conference call.

We plan to start the first round of surveys as early as late last week, or early the week of June 5

Thanks,

**Joyce Pickle**  
**Project Manager**



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