From:	Davis, Dawn
To:	Doherty, Kevin
Cc:	Skora, Genevieve
Subject:	Re: USGS fire risk model
Date:	Tuesday, February 24, 2015 1:29:19 PM

Gen,

Here is a list of fire-related research we anticipate will be coming out of USGS:

Wildfire patterns and interactions with vegetation within the range of the sage grouse
USGS PIs: Brooks, Shinneman, Matchett
Description: Previous studies have indicated that the area burned by wildfires has increased during the past few decades in desert and semi-desert regions of North America; however, these reports are typically based upon point data or fire perimeter data that are often inaccurate and potentially misleading. USGS researchers are using highly accurate burn severity data derived from satellite imagery to perform more precise analyses to better characterize trends in area burned within the range of the sage grouse. They will use climate and environmental variables to evaluate potential future trends in area burned within each sage-grouse management zone and priority area. Researchers will also assess how potential, future shifts in sagebrush vegetation under climate change will affect the patterns and frequency of wildfire, especially due to the increasing influence of non-native grass species.

N**est Survival of Greater Sage-Grouse at a Fire Impacted Site**
USGS PIs: Casazza, Coates
Description: USGS is studying the habitat-use patterns and reproductive success of sage-grouse in an area impacted by wildfire in northeast Nevada. Results of this study will provide crucial information for understanding the factors associated with sage-grouse population persistence and recovery and can assist with validation of national and state conservation strategies. In addition, results can help inform managers of how sage-grouse are influenced by annual grass invasion and the importance of large intact sagebrush-dominated landscapes

Assessing the Impacts of Wildfire and Invasive Grass on Greater Sage-Grouse Populations
USGS PIs: Coates, Casazza, Pilliod
Description: Variation in wildlife within sagebrush ecosystems is frequently identified as a primary environmental driver that contributes to the decline of sage-grouse populations in western portions of their range. Using Bayesian state-space models of lek count data spanning 35 years, USGS is investigating the impacts of wildfire on population growth rates across a relatively broad spatial extent (i.e., Great Basin). Specifically, USGS is modeling sage-grouse lek persistence and rate of population change as a function of multiple wildfire related factors including amount of burn area in relation to lek sites and burn severity. A second analysis will evaluate the influence of restoration activities following wildlife using the extensive Land Treatment Digital Library developed by USGS in cooperation with the BLM. This analysis will enhance understanding of how sage-grouse respond to wildfire and sagebrush restoration across different spatial and temporal scales and address prominent information gaps that hinder management and protection of sagebrush ecosystems

I suggest contacting Pete Coates with specific questions related to his various modeling efforts.

On Tue, Feb 24, 2015 at 12:13 PM, Doherty, Kevin <kevin_doherty@fws.gov> wrote:

> Genevieve,
>
> I do not know the name of the researcher(s), but know they are with USGS. My understanding from the modeling workshop was their work was not going to be ready in time, so I have not given it much thought sense. Dawn, do you have any more info for Genevieve?
>
> Cheers
> Kevin
>
> On Tue, Feb 24, 2015 at 11:36 AM, Skora, Genevieve <genevieve_skora@fws.gov> wrote:
>
> > Hi Kevin,
> >
> > You mentioned that USGS was working on a fire risk model. Could you tell me what researchers or what group is working on that model? Do you have any information on what they are doing?
> >
> > Thanks,
> >
> > _____
> > *Genevieve A. Skora*
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