From:	Wiechman, Lief
To:	Juliusson, Lara
Cc:	McPherron, Heather; Lindstrom, James; Dawn Davis; Steve Abele; Pat Deibert; Jesse D"Elia; Angela Burgess; Joy Gober; Lisa Solberg Schwab; Ronald Baxter; Ed Turner; Rich Young; Nicholas, Amy
Subject:	Re: GRSG Final answer on chapters to address Energy/Infrastructure
Date:	Friday, March 20, 2015 12:25:53 PM

After talking to Lara, I think I'm referring to the latter. The thought process is more related to the fact that the O&G model will produce a probability of O&G (and therein the associated infrastructure; compressor stations, roads/spurs, etc.), and now we're venturing down a path where we subset infrastructure by energy type... and we just need to make sure in all the subsetting of infrastructure type/parent, that we have the ability to describe the threat of infrastructure as a whole.

This could also have an influence as to how we describe indirect effects by structure type, not by energy parent source...
So... I guess after all of this, I agree with Dawn. Proceed as you have and if it's an issue we'll sort it out soon.

LW

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On Fri, Mar 20, 2015 at 8:36 AM, Juliusson, Lara <lara_juliusson@fws.gov> wrote:

> Hi Lief,
>
> Not sure if when you say "jive with the infrastructure included in the O&G modeling analysis" you are talking about infrastructure used to create the O&G risk model itself, or you mean infrastructure that will be analyzed with (overlain with) the O&G model. Can you clarify? If the former, I can answer, if the later, I believe that is still TBD.
>
> Lara
>
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On Fri, Mar 20, 2015 at 7:18 AM, Wiechman, Lief <lief_wiechman@fws.gov> wrote:

Thanks for the background.
With this 'child-parent' path of grouping types of infrastructure, does it jive with the infrastructure included in the O&G modeling analysis (assuming this would include pipelines, compressor stations)?

Landfills... not sure. I could see an argument for urban expansion.

Reservoirs... Assume we're discussing in the traditional sense? And would they be lumped in with CBM holding ponds and/or stock ponds...? Or are you referring to stock ponds? I guess I'm not up to speed on how these 3 types of water holdings have been discussed.

LW

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On Thu, Mar 19, 2015 at 3:11 PM, McPherron, Heather <heather_mcpherron@fws.gov> wrote:

Lief -

We've tackled the ever intertwining infrastructure chapters (oil and gas, wind and solar) by lumping production type children structures (wells, towers, etc.) in to their respective energy parents. And then splitting all powerlines and roads out (even those constructed only for oil and gas or wind and solar) in to the infrastructure chapter. The infrastructure chapter explains this in the intro and provides chapter linkages to hopefully direct the reader to the other chapters. The bi-state species report seemed to take a similar approach. Except for fences were lumped within infrastructure rather than a stand alone.

Other questions for the species leads and group:

Bi state includes landfills and so far the writing group has been discussing the appropriate location - infrastructure or urban development? Any thoughts? A quick GIS analysis did not identify any landfills in the study area, but Ed is analyzing a different data set to investigate further.

And what about reservoirs?

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On Thu, Mar 19, 2015 at 12:56 PM, Nicholas, Amy <amy_nicholas@fws.gov> wrote:

There is a lot of ways to look at it. I for one would not consider wind turbines infrastructure.

In 2010 Powerlines, communication towers, fences, roads, and railroads were specifically called out under *Infrastructure in Sagebrush Habitats*. Other types of infrastructures, e.g. pipelines, gas related power plants, were discussed in Energy Development.

FYI for Species Lead Team...
With new species report format, we were discussing how we should approach. Do we want to be lumpers or splitters? Obviously ALL of these things will be discussed somewhere often in multiple chapters, question was do we want to have narrative for each in infrastructure and where do we draw the line on what is infrastructure? Should we mention Fences in Infrastructure??? etc, etc...

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On Thu, Mar 19, 2015 at 1:17 PM, Wiechman, Lief <lief_wiechman@fws.gov> wrote:

Hi Jim,

I'm looping the rest of the Species Leads in on this. Maybe we can discuss via email, or on our SLT call tomorrow.

Without a some of the background discussions, is there a reason we wouldn't include all types of infrastructure in the infrastructure analysis? Roads, power line, pipelines, met towers, wind turbines... all infrastructure, all vertical features on the landscape. But there's different ways to view this...

LW

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On Thu, Mar 19, 2015 at 1:02 PM, Lindstrom, James <james_lindstrom@fws.gov> wrote:

I just wanted to follow up and make sure there is a final answer on what we talked

about regarding where to address certain energy and infrastructure stuff.

Currenttly

- Pipelines and Oil and Gas Related Power Plants (anything that produces or uses Oil & Gas) has been addressed in the work I have done with Amy for the Oil and Gas chapter.
- MET towers have been addressed in my Work with Lisa for the Wind chapter.
- Power lines are being addressed by Ed for the Infrastructure chapter.

If any of this (and/or others) needs to be changed please let Ed and I know. Also, as I said on the call I have only been looking at what is on the ground and Operating/Active/Producing/... If additional data/info needs to be looked at please let us know.

Thanks,
Jim

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