From:	Turner, Ed
To:	Wiechman, Lief
Cc:	Juliusson, Lara; Jim Lindstrom; Rich Young; Pat Deibert; Kevin Doherty
Subject:	Re: GIS: Spatial Needs for Species Report
Date:	Monday, March 30, 2015 11:41:16 AM
Attachments:	03.29.15 LW - Comments on Sp. Report Maps_Eds_Notes.docx

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Lief, Here are some note from me on the maps that I have worked on.

Thanks, Ed

On Mon, Mar 30, 2015 at 11:05 AM, Wiechman, Lief <lief_wiechman@fws.gov> wrote:

> Something to keep in mind re: CED data... Not all acres associated with the spatial files are actually the metric of the action. This is the 3rd(?) bullet down, explaining the potential discrepancies between the 'calculated' and 'reported' GIS acreage. Simply clipping the project boundaries may not be accurate. Definitely something we should discuss.
>
> LW
>
> ***Lief Wiechman***
> **Sage-grouse Ecologist**
> **U.S. Fish & Wildlife Service**
> **Mountain-Prairie Region**
> **Cell: 307.214.8426**
> **Office: 307.772.2374 x236**
> **lief_wiechman@fws.gov**
>
> On Mon, Mar 30, 2015 at 11:37 AM, Juliusson, Lara <lara_juliusson@fws.gov> wrote:
>
>> Hi Lief,
>>
>> Thanks for these documents. This is all going to be very helpful.
>>
>> I've provided some comments/questions on the products list document you sent. Some of my edits are just details on specific data sets and methodology we will be using, so that we are consistent. The comments are clarifying questions for you and the SLT.
>>
>> Thanks!
>> Lara
>>
>> Lara Juliusson, Geographer/Ecologist
>> Sage-grouse Energy Team
>> U.S. Fish and Wildlife Service,
>> Region 6, Lakewood, CO
>> Lara_Juliusson@fws.gov
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>> ***Join me on LinkedIn***
>> http://www.linkedin.com/pub/lara-juliusson/5/918/7a4

On Sun, Mar 29, 2015 at 4:29 PM, Wiechman, Lief <lief_wiechman@fws.gov> wrote:

GIS Team,

Please see attached documents:
(1) A list of products needed (maps as well as [example] tables populated). Also contains some generals notes and topics to discuss. SLT understands that some of the requested products may already be created/completed, but are subject to changes upon further review. I have also spoken to Kevin and it is possible that there maybe overlap on this list with some of the products he intends to generate. We will coordinate to eliminate any duplicate effort. Finally, this list may not be final. Things will likely come up as we put this product together.

(2) I have reviewed the list of maps already created for various chapter of the Sp. Report. This list of comments (as well as the product list) will be sent to the SLT for review in the near future as not all maps were included in the chapter at the time of SLT review.

(3) and (4) Two documents you've already seen: A list of BLM products and associated description of products delivered. Only relevant because of the example table discussed in (1) as possible analysis needed and associated products to be generated.

Please review and provide feedback for discussion on Wednesday.
I'll try to get on SharePoint as well...

Take care,

LW

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---------- Forwarded message ----------
From: **Juliusson, Lara** <lara_juliusson@fws.gov>
Date: Mon, Mar 23, 2015 at 7:52 AM
Subject: Fwd: GRSG: BLM ADPP and No-Action spatial data received
To: Rich Young <Rich_Young@fws.gov>, Ed Turner <Ed_Turner@fws.gov>, James Lindstrom <james_lindstrom@fws.gov>
Cc: Lief Wiechman <lief_wiechman@fws.gov>, Drue DeBerry <drue_deberry@fws.gov>

Hi GIS Team,

An FYI that we received all the BLM ADPP and no-action alternative data last Friday. Stay tuned for the SLT to tell us how they would like us to incorporate those data into analysis and maps.

Thanks,
Lara

Lara Juliusson, Geographer/Ecologist
Sage-grouse Energy Team
U.S. Fish and Wildlife Service,
Region 6, Lakewood, CO

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---------- Forwarded message ----------
From: **Juliusson, Lara** <lara_juliusson@fws.gov>
Date: Fri, Mar 20, 2015 at 3:42 PM
Subject: GRSG: BLM ADPP and No-Action spatial data received
To: Pat Deibert <pat_deibert@fws.gov>, Lief Wiechman <lief_wiechman@fws.gov>, Jesse DElia <jesse_delia@fws.gov>, Dawn Davis <dawn_davis@fws.gov>
Cc: Matt Kales <matt_kales@fws.gov>

Hi everyone,

Just confirming that BLM emailed ALL of the layers for ADPP and no-action to us this afternoon.

With a quick review, I'd say it looks complete to me, and the data loads into ArcGIS. I'm attaching here the delivery memo and list of datasets .PDFs for you.

I've put the data up on ScienceBase, here: https://www.sciencebase.gov/catalog/folder/550c909be4b02e76d759d771

Thanks,
Lara

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Species Report Maps – Comments/Edits
3.27.15
Draft – Deliberative

GRAZING MAPS (3):

Why populations? Why not occupied range? Population boundaries are drawn by the states independently of any consistent rule set. Likely contain expanses of non-habitat, so we should be selective as when we use them and for what purpose.
I like how the background within MZs appeared to be lighter than outside.

Bi-State – I'd like to take the cross hatch and clip it to the Bi-State Popl'n boundary – or – change the color slightly from the rest of the range (and maybe do this for Canada as well), and then add a parenthetical note stating these areas were excluded from calculations (as we do on the tables). Let's discuss with the group.

We've clipped Gunnison range to most/all of these maps - Should probably do here as well. I think it's easy to get some of the southern GRSG poplns in CO mixed up with a couple of GUSG unless you're really familiar.

COAL MAPS (1):

We'll need to decide if we want to label the MZs with text? Or simply cover that with one map early in the species report, and then refer to it in text after…? This looks to be the only map with MZ labels. Should we be identifying the buffer radius distance for the indirect areas of influence? We'll describe the AOIs in the text, but the distance, bight be helpful.

Is separate or include in the mining maps?
*** These maps are not correct as they attempt to depict indirect impacts. Indirect impacts are something that will not be possible with all footprint data and the latest was we would not try that. These maps also look at all coal (based on data we may not use?) within MZ's and not current range only as other threats. I assume we will change the data or limit to the current range then update. As for MZ number, it was helpful at the time, but it is not needed.

INFRASTRUCTURE MAPS (1):

What's the difference between FCC Towers and FAA Obstacles… could those be combined (different symbology/colors) and have 1 maps.

*** The records in FCC and FAA are both obstacles as they are vertical or elevated off the ground. Short answer, I do not see why we could not combine those on one map. Either specific colors or not as they seem to represent vertical obstacles.

Note; some FAA could be obstacles other than towers (buildings, cranes, tall structures, etc.), but all or tall things that could provide predator perch. FCC is generally a record of the permitting for use types on said towers (FM/AM, ham radio, microwave, etc). In many cases, the FAA tower representations are also covered in various FCC records of permitting. Thus if records are not exact same spatial location we could be representing more tower on the landscape than truly exist. How to determine this is proving tricky. With FFA towers and MET towers, we are getting close to determine redundancy. If the MET towers prove to be represented in the Feb, 2015 FAA data release, I will code those towers as MET and

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will not allow those to be buffered for footprint processing. Also, based on BLM effort data that we have received it looks as if they left overlapping buffer footprint areas. If so, and if these data were used for acreages the numbers would not have been correct.

There could be an issue with the fact that BER 2013 analysis seems to have used all FAA data regardless of status or verification code as true footprint. We began to remove FAA considered "Dismantled", but then determined that many of those records are not considered "verified". This is something we will need to discuss as 11 MET towers are considered "Dismantled", but approximately one-half of those are "unverified". I will attempt to ground check those this week. Decision on how we use these data will need to happen.

Information related to indirect AOIs is coming.

This is probably a good example of why we should change the 'occupied range' layer to a shade of grey or tan or something. Thinking maybe changing the water (oceans, Salt Lake) to a very like shade of blue (blue-grey), the US a slightly darker grey, and then the occupied range a lighted shade of grey – so the features (threats, conservation actions would pop and we could utilize more colors.

*** I agree light shade or transparency shade would help in data visibility. I have been using the "Lotus Green" that was chosen by the GIS Team, but have been using a 40% transparency. This seems to help with threat visibility on the maps I have been working with.

I think we would like to see a map of multiple types (Vertical [comm towers, met towers, transmission lines] and linear [railroads, pipelines, interstates, highways]) the infrastructure combined in addition to each of them depicted individually as you have already.

*** This is an option if needed; we can simply combine these data types on one map, as each is individual for specific maps at present.

Question for the group: Should we be displaying any of the threats in Canada unless we have information for it all…?

MINING MAPS:

I think we've got a plan to discuss this data set, how it can be improved, and what are the steps needed to do so (re: LR2000, etc.) If we don't have those steps in mind/on paper, we should attempt to develop one very soon.

Combined with Coal…?

Are we going to differentiate by type (BLM Classes)
Perhaps, if the data is available, we could use different symbols/shapes if we have that data that differentiates.

We'll also have information related to indirect AOI.

Remove GUSG portion of the range.

*** Mining is like Coal, it all needs to be reworked, data, maps, numbers, etc.

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HORSE MAPS:
Note to E.T.: per our conversation, is it possible to differentiate between BLM and FS on the areas/territories…?
Question for SLT: Not being able to display HMA, etc. over AMLs, how about BLM/FS Grazing allotments…?

*** I did not map USFS vs. BLM due to inconsistencies in data sources. There is overlap within these data when combined. We could simply shade BLM a solid color and hatch USFS if that would help. Also, some areas be then BLM or USFS could be managed by the other agency and should have the color of the other agency, but that would be a case by case basis and these data (any data that exist), will not allow that. Thus the reason I classified areas as WH_WB area in general. Please not that if we do not dissolve the USFS/BLM data together we will have double or multiple counting of footprint acreage within the range. I can try options if we would like.

URBAN MAPS:
Helpful to add a few major metropolitan areas for reference…? State Capitols and cities over 100,000… (we can be subjective with the population value)? Possibly adding Interstates…?

*** I could look at placing the Major roads and places locations (names) and see if it gets messy.

WNV:
Add information from CDC to illustrate counties that have confirmed presence of WNV and increase color intensity by the number of years present between 2000-2005, 2005-2010, and 2010-2015. Take point data information and replace with individual points (offsetting slightly to over overlap).

Replace populations with occupied range.

INVASIVES:

CONIFER:
Let's discuss. After we receive NRCS's Conifer Removal Data, I believe we can begin to create a few draft maps. Perhaps with a very coarse-scale estimation from the BER (or BLM Monitoring Framework?), and overlay Conservation Effort data after we rolled it up to the same scale as the NRCS. Likely using randomly placed centroids/points on nearest public lands (to protect PII) and use variable sized concentric circles based on acreages associated with effort. We have to use multiple symbols to differentiate 'completed' from 'planned' and 'in-progress'.

FIRE:
Will have to use GeoMac and MTBS data to illustrate fires (split out by year), as well as conservation action data (split out by year).
Work with Modeling Team, to coordinate maps illustrated for WAFWA's R&R Matrix.
Coordinate with Dawn and Lief to acquire layers related to FIAT process as they're available (TBD).

OIL & GAS (PAST to PRESENT):
Assumingly we'll have point data illustrating all wells (producing and non-producing [if data available]) on the landscape.

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WIND:
Assume we'll have point data for turbines…? If so, will this be covered by FAA and/or FCC data? Given wind production will not be modeled, possibly illustrating those areas (1) approved for ROW by BLM (using land use decision layer), and (2) high in wind development potential.

SOLAR:
Existing fields within occupied range… very similar to Wind.

GEOTHERMAL:
Existing fields within occupied range… very similar to Wind.

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