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To: [Lief Wiechman](#); [Lara Juliusson](#); [Jesse DElia](#); [Drue DeBerry](#); [Kate Norman](#)
Subject: GRSG Spatial data inconsistencies for state fact sheets
Date: Friday, February 27, 2015 5:19:05 PM
Attachments: [20150220_ConsistencyInAcreage_LJ_Ed pd.docx](#)

As tasked on the ARD+ call, attached are my suggestions for addressing the purported spatial data inconsistencies as revealed by development of the EA state fact sheets. Although most of the original white paper on this issue was no longer applicable when the source of the discrepancies was discovered I still used it as the template for resolutions. As such, it might be better reviewed with track changes turned off.

Please review and edit as appropriate. I would particularly appreciate review and feedback of the recommendations for future efforts. I realize that some of those items have not been fully considered to date, and that we will need further discussions for resolution. However, we need to address this immediate issue and this is my attempt.

Once we are comfortable with this document I will move forward to the ARDs. Lara - if we need to bring in the rest of the GIS team at this time please advise.

Thanks!

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Local vs. Rangewide GIS data

Problem Statement:

The EA folks ~~External Affairs~~ are ~~working developing on~~ state fact sheets describing conservation efforts, and has requested the assistance of the GrSG GIS team in calculating acreages of Greater sage-grouse range in each state. - The ~~GrSG~~ GIS team ~~has used the identified best available spatial data (2015 BLM SMA data) layers for these efforts~~ that are consistent across the range, including the ~~- For example, 2015 BLM SMA data, and the GRSG 2015 USFWS Status Review Current Range, etc. (The 2015 current range data is an updated version of based on the original 2004 Schroeder et al. range, as updated by WAFWA in 2014. Additional modifications were made by FWS, with concurrence from WAFWA, to include Current Range data set which includes additional occupied habitat data that had been inadvertently omitted. The range map, and was approved for use by the GrSG Species Lead Team in 2014).~~ Individual states or ~~Some of the Individual FWS Field offices may have are currently using identified different numbers acreages that are were derived from localized sources including States, BLM and other partners local knowledge (not necessarily spatial data). - and potentially older (2004) Schroeder/WAFWA current range.~~

~~Currently, there is~~ The concern problem is the use of seemingly ~~ever having is that we do not want to~~ inconsistent data for different Greater sage-grouse efforts (including but not limited to ~~used between these efforts EA fact sheets, and what is used for the rangewide status review analysis and modeling efforts for the species status assessment.~~

Options Resolution:

- The inconsistencies in the data identified for use in External Affairs fact sheets was a simple matter of terminology. External Affairs was using acreages for the range of the species, whereas the local information presented for use identified the actual habitats occupied within the range of the species. The range of the species is larger than occupied habitat simply because the range encompasses all areas within which sage-grouse may be found, and may contain areas of non-habitat. Occupied habitats provide a more refined resolution of exactly where the birds occur based on vegetative communities.
- The apparent conflict between the two data sets considered for the External Affairs fact sheets was due to this confusion in terminology. Inconsistencies were artificial.
- In completion of the fact sheets the range of the species will be used for all states. Some individual FWS state offices are also choosing to include information describing actual habitat acreages in that state, but identifying that FWS is not the source of those data, and that the accuracy, given the derivation of the non-spatial data used in those calculations cannot be verified by the FWS GrSG GIS team.
- We could use different numbers/data for different efforts. The Fact Sheets could use local data that isn't GIS-based.

Comment [TE1]: This seems like a big problem. The local offices are using data from the state level and using old occupied range. Any work that they do regardless of the specific data, must use the up-to-date current range. If the local offices are using GIS and localized data, values will not match.

Comment [DP2]: agreed, but refer to resolution.

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○ ~~PRO: The fact sheets would have more refined data that matches existing literature and cited sources.~~

○ ~~CON: The numbers will be inconsistent with what will be used for modeling and analysis.~~

● ~~We could use the same data (GIS Team layers) for all the efforts including the status review analysis and fact sheets.~~

○ ~~PRO: The numbers will be consistent between the status review and our communication materials.~~

○ ~~CON: The numbers may not match what our local offices have previously shared. If numbers do not match, we can provide a disclaimer and cite sources to explain the differences. We need to know if~~

● ~~We could try to modify the GIS layers to be more consistent with the numbers provided by the states. This may require a great deal of work.~~

○ ~~PRO: This would allow consistency between the status review and the other materials; it would also potentially improve accuracy of data layers.~~

○ ~~CON: Large amount of work and may be difficult to maintain consistency across the range. Every state might not provide refined data. Some state data may not have as high a quality, or be as current as rangewide data designated by the GIS Team. It may be difficult to use state data in modeling efforts.~~

Comment [TE3]: This is true, but will they consider the GIS/Modeling effort as a general rangewide guide and then comment that they have refined state level data to direct local conservation, etc.? Seems to me that will open pathways for legal challenges.

Comment [TE4]: This seems like the best plan if looking at things as a whole, rangewide.

Recommendation for Future Efforts:

● The issue of inconsistency in data was identified by the efforts of External Affairs, but also needs to be fully considered in all aspects of the status review as we move forward. To avoid similar confusion in the future FWS should:

○ Use consistent layers (GIS team created) for:

- WAFWA Management Zones
- GRSG Population Boundaries
- Current Occupied Range of GRSG

● FWS will also consider occupied habitat information as provided by the modeling of habitats in NV, CO and WY (those states that have completed, or nearly completed modeling efforts). A strict set of criteria outlining the use of those data will be developed by the Species Lead Team.

● FWS will also consider non-spatial data and other habitat information provided by the states in the status review process. As much of that data is currently unavailable the criteria for its use will be developed by the Species Lead Team as the data are received. All data (including the habitat model data described above) will need to be scientifically based and derived using the best scientific data available, and will preferably be peer reviewed. All habitat information received will be evaluated using the same criteria to ensure consistency.

Comment [TE5]: This is correct, possible not all state offices will have like data or even data that can be used in GIS/Modeling formats. We are talking about a timeline that is based on the use of data (range data) created at national offices and manipulated by us to within the management zones and current range of the species. The national offices pull and compile the state office data they collect. Do we really have the time to search each state, try to build or convert each states data or lack thereof, and then blend it as a rangewide data? We currently have been following the OF-Report guidance and creating on the ground data based on rangewide. If we do attempt to build all new data to rangewide level from state or local office submissions we could be talking about a timeline that is not possible. Do we have the time to do this and what if states are lacking data? I would assume the data will differ greatly from state to state if it even exist.

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Additional Information:

~~Numbers from Field Office Fact Sheets~~

State	GIS Data acreage based on 2014 Schroeder	Field-Office acreage	Source of FO acreage
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<u>occupied range</u>			
Oregon	<u>18.9 million</u>	<u>~14 million acres</u>	<u>Oregon BLM, ODFW (Historically Oregon had 17.7 million acres of habitat. They currently have 14-15 million acres, 80% of historic distribution)</u> <u>http://www.blm.gov/or/news/files/sage-grouse-fact-sheet.pdf</u>
Idaho	<u>16.9 million</u>	<u>~14 million acres</u>	<u>IDFG, Draft BLM RMP</u>
Washington	<u>2.7 million</u>	<u>4.2 million</u>	<u>Includes all WDFW Sage-Grouse Management Units (not all areas are occupied but accounts for potential expansion through recovery.</u>
Nevada*	<u>37.6 million</u>	<u>Combined CA/NV 30.7 million acres</u>	
California	<u>4.3 million</u>		

Comment [KNorman6]: Is this the status review Occupied Range?

*Dr. Peter Coates' GIS data: a total of 30,776,101 total acres with CA and NV. Not sure where the The additional 11 or so million acres discrepancy was explained to R1 as likely the difference between using Coates' new habitat data to represent range, and using the GRSG 2015 USFWS Status Review Current Range data.

Comment [TE7]: I don't know how to comment on this other than the numbers will naturally be different. Look at WA, they look at areas that are not considered occupied, but Management Units that I assume differ from USFWS MgmtZones? What about the other states within the GRSG range did they match? Is that why they are not represented in the table? Table only notes 5 of the 14 states that are touched by the 2015 USFWS GRSG Management Zone extent.

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