

Sage Grouse Noise Meeting Minutes  
January 30, 2014  
9:00 a.m. – 11:00 a.m.  
Pinedale Field Office, Rendezvous Room

Attending:

BLM: Eric Decker, Regina Lester, Shane DeForest, Joe Budd (WDA), Theresa Gulbrandson, Mark Thonhoff, Josh Hemenway, Lisa Schwab.

WGFD: Therese Hartman, Dan Stroud, John Lund.

Operators: Erika Tokarz, Aimee Davison, Kelly Bott, Nancy Feck, Melissa Cunningham, Pete Guernsey, Kevin Williams.

Conference: Darla Potter, Skip Ambrose, Cally McKee, Debbie Stanbury, Chris Wichmann, Tom Foertsch.

\*Denotes Action items.

## Agenda

### 1. Introductions

*A meeting was held to discuss the report "Sound Levels of Gas Field Activities at Greater Sage-grouse Leks, Pinedale Anticline Project Area, Wyoming, April 2013" (August 2013) by Ambrose and Florian. The "peer review" document by Mr. Howard McGregor of this report and to address Industry concerns and questions concerning sound monitoring methodology and the actual decibel levels that affect sage grouse.*

Aimee Davison: Operators had concerns because they feel several elements in the report exceed ROD requirements for monitoring noise at the edge of Lek locations. The report includes ambient data for reference areas, noise collected from equipment and various practices occurring in the field without regard to distance from leks just to gather noise data. There are concerns with additional studies being added to monitoring studies. The monitoring and mitigation funds are limited and have declined.

Operators feel the study is not scientifically sound and have concerns with the approaches used, inaccuracies in some of the reporting, no transparencies within calculations for data gathering techniques.

Two identified items of concern where:

1. Any monitoring that needed to be done in regards to associated lek boundaries for noise data needs to be well thought out.
2. Methods should be standardized for repeatable measurements.

Operators believe both of these items were overlooked to some extent in regards to the outcome of this report. In the Cooperating Agency Review nowhere does it dictate a full research effort such as what was received in this report.

*\* Operators contend there are a number of technically unsound items in the report Operators ask that the report be removed from the website. They also ask that until items in the report are justified or sorted out among the scientific community the report not be used for any future decision making regarding noise (sage grouse) until it is clarified and agreed upon in the scientific community.*

## **2. Technical considerations: Pete Guernsey**

Just received the peer review response from EDI and has not yet reviewed it. There will be technical points that will not need to be covered today.

There are 2 items of concern:

1. Measurements were to be taken at lek edge and this report takes measurements at 100-200 meters. There can be changes of 10 decibels at a 200 meter distance. Will this put the number at 10 decimals above the 39?

*A discussion was held concerning the question of location of the monitoring equipment and how much decimal change the distance would make.*

### **Comments:**

Therese Hartman elected to have Skip Ambrose address the issue.

Skip: The protocol was to measure 100-200 meters from the edge of the lek so sage grouse sounds were not part of the data. In fact 100-200 meters may not be adequate. Would the group want grouse sounds included in the decimal data? All agreed grouse sounds should not be part of establishing ambient or measuring gas field sounds at leks.

Skip: The sounds from grouse on the lek can influence noise measurements.

Sage grouse sounds should be excluded from the measurements.

Leks are fluid, grouse move around and 100-200 meters may not be far enough or accurate. Measurements made near leks in the gas field were made so that the acoustic equipment was the same distance from the gas field sound as the lek, hence those measured levels were what the grouse experienced..

Pete G: An approved way to do this would be to disregard noise when the grouse are strutting.

Skip: The use of L90 could be a way to do this. The grouse are most active from 5-9am and during that time more than 50% of the sounds were made by the grouse. The L90 is the noise level that is exceeded 90% of the time, and since they are generally leking <90% of the time, this metric provides levels with little or grouse influence and therefore it is appropriate measure. From 12am -5 am there is generally little grouse activity. Three approaches to establish background ambient: move systems away from lek, use the hours 0000-0500 when grouse activity is low, or use L90.

Pete: Would not use L90 because it discards 90% of the noise. Not including readings while the grouse are strutting would be good. We are trying to establish a noise level not an ambient level at the lek.

Aimee Davison: Patricelli report called for things that were not done in the field.

Therese Hartman: Patricelli developed the protocols for this study. The RFP was written with Patricelli protocols for the contractor to follow.

Skip: The only deviation from Gail's recommendations was the time periods measurements taken were longer than recommended.

**Page 1 Bullet 7 (Blickley and Patracelli noise monitoring protocols states)**

“should exclude time periods when birds are leking”.

“measurements should be made at multiple sites, 3-4 locations between each noise source and the edge of the protected area.

“on lek measurements should exclude time periods when birds are leking.”

Pete G: This would indicate that data should be taken before and after strutting. Not at 200 meters.

Aimee: “Measured from the edge of a lek”, indicates a time factor would have been an appropriate measure to use to stay in alignment with the ROD.

\*Skip: Will review Gail's original intent and can provide both of these. The intent was to exclude grouse sounds, either by having the equipment far enough away from display or by using hours with little or no grouse displays.

Aimee: Measurements made off lek should be similar topography and relative noise sources in the area, was this measurement conducted?

Skip: An equal distance from the noise source was the goal and terrain was the same.

2. Maps were not included to give Operators enough information about monitoring locations.

*A discussion was held concerning the lack of maps defining the monitoring sites.*

**Comments:**

- Some maps were not published due to the sensitive of locations of leks in a public document.
- \*Game and Fish will share the maps but, they do not want them published in any reports.
- \*Operators would like copies of maps.
- The main object is to define “what is the noise at the lek and is it 10 decimals above the established background level?” Operators contend this report doesn't call this out.

- The ROD calls for monitoring at the Lck to determine whether noise levels are above the (39 decibals plus 10) 49 decibals and Operators feel this is the reason for the monitoring/study.

Shane DeForest: The adaptive management provided in the ROD allows the BLM the opportunity to identify areas, (as we go along) area inconsistencies, misinterpretations and unclear expectations, this will allow modifications as necessary. If we identify one of these this affords us the chance to change it.

Kelly Bott requested that Shane DeForest clarify what “inconsistencies/misinterpretations” would be.

Shane gave the group a general overview of types of inconsistencies and misinterpretations handled by the BLM by providing examples of past adaptive management decisions.

### **3. Process considerations**

*A discussion was held concerning the time and distance of measurements. The recommendation was to measure for 1-2 hours. Skip measured for more than this to get more accurate data. The possibility of 39 decibals being an inaccurate number to start with was addressed.*

#### **Comments**

Mark Thonhoff: Page A18 of the ROD discussed the 3910 standard and leaves room for additional analysis. It states “further restrictions may be required” if species is listed as threatened or endangered pursuant to the Endangered Species Act. Sage grouse was put on the endangered species list in 2010.

Shane: It was, in the BLMs opinion, appropriate given the information that was at hand at that time, if background is far from 39 then what exactly is the number is the question?

Pete: The opposite could be true, if we are developing this field in a way that we don’t even achieve the 39 decibals level. Development protocols are keeping it below the 39.

Shane: Operators have not produced this level at lek locations, but there is a reasonable need for BLM to know what the real noise level number is.

Pete: 39 was selected as a “reasonable noise level” for a developing gas field.

\*Shane- This is a key consideration, must follow the precise wording in the ROD. Should consider this as it relates to the future in the field, when the noise standard has been established, we will then look at this and one of the considerations may be to change the wording or modify the matrix to say noise levels may not exceed 49 decibals. We could create a decision to modify the decibal levels in the matrix

Skip: On establishing ambient, there are a few different approaches. One way is the Wyoming Governors recommendation, to use L50 at sunrise. Gail's recommendation is to use L90. Given that we want to exclude grouse sounds, both approaches would provide pretty similar results. Regardless, both of these approaches would yield an ambient of about 15 dBA ambient, while the ROD says ambient is 39 dBA. We are looking at both ends of the spectrum. While this study was in part to establish ambient, the real question is what level affects grouse. We do not know what level is critical to grouse

Pete: S.G.I.T. work is being done for core grouse and this development field is not in core.

Shane: BLM will weigh all of this together in the future and this will be a later question.

Aimee- Shane said he has reason to believe 39 is not accurate. What need was identified that led to collecting ambient?

Therese: The matrix called for what needed to be measured, KC Harvey's first recommendation was the 39 decibal values needed to be evaluated. Their numbers indicated the gas field activity was already at 44 on the edge of a drilling pad with an active drilling rig. If we are getting 44 at the edge of drilling rig, allowing 49 would leave nothing to protect the birds, the purpose was to come up with an ambient level to protect the birds. This led to the need to investigate the number further.

Skip: KC Harvey used type 2 equipment that would measure down to about 25-30 dBA. Better, type 1 equipment measures down to about 15 dBA, so the better equipment provides better, more accurate levels.

Therese-The staff collected data, considered what the CWY COOP review recommended, and contacted Gail Patricelli with UC Davis, because of her noise expertise and asked her to develop the protocol. The protocol included standard methods (as recommended by the WY COOP). Part of the protocol was to establish a baseline ambient level. This year (2014) we won't need to collect additional data in reference areas, we have the baseline data information.

Aimee: Did the PAPO Board know this included ambient noise monitoring outside of the core area when they approved the funding?

Therese: The board knew about the issue with the KC Harvey report in 2009, that staff rented equipment and board knew the staff collected data in 2010 They have been informed of the process from 2009-today. There were public meetings to discuss this.

Aimee: Was it known that we are going to collect data outside of the ROD and there would be noise data collected on equipment?

Therese: There is an RFP that defined what was being done and the Board members signed it.

Shane: Doesn't know at this point if we asked the Board but, doesn't think the Board would say collection outside of gas field is outside of the ROD. What is the level minus what has been added? May need to step outside of the project area boundary to determine that.

Pete-With regards to "ambient"- is what it is, not what it might have been or without, it's what it is right now. This is where 39 came from and Operators know there was already a certain level of noise.

Therese- disagreed, she sat in on the meetings discussing this item during the EIS development and remembers the group had no clue about the number then, it was inherited from other NEPA documents. It was picked and carried forward as a surrogate. It was in 2010 that Gail Patricelli researched the source of where 39 dBA come from. There was no conscious thought by the group that developed the matrix to use -39 dBA because it was considered appropriate.

Shane: There is currently no defined path, we are awaiting the conclusion of the S.G.I.T. process, the commitment by the BLM is inclusive of consultations with the members of the PAPO Board is to await the conclusions of the S.G.I.T. process, evaluate what the determinations are and the follow up decisions from the Game and Fish. Then review the data and proceeding forward may be doing nothing or modifying the wording to make it 49. We are here now because of the words that were put in the ROD.

*A discussion was held concerning the public comment period, the availability of information, Public Meetings, the availability/unavailability of formal announcements or discussions of the elements that were found in this report.*

## **Comments**

Kelly: How do operators better engage in the process? This was not presented to the operators, when they saw Patricelli recommendations Operators feel these were above and beyond the reference area evaluation, the evaluation at operations and gas field development sources.

\*Shane: During the PAPO board meetings, if the finer points didn't come to light, during the public comment period Operators should ask specific questions. The BLM should incorporate what we know, and when we come before the board, know what the main objects are. So with regard to the presentations, as it relates to operators interest in the monitoring, when presented to the board include what the objectives of this monitoring "are".

Shane presented possibilities:

- A. Provide additional information stating the objectives to the board when requesting money.
- B. When preparing solicitations, with specific scope of work to vendors, will post the information on the web.

- \*Operators would like to see the bid list sent out to contractors for the monitoring projects.

- Operators feel there may be some out of scope work and would like to avoid that.
- \*The objective to create a pathway for operators to review and provide comments before the contractor is selected.
- Could post draft RFPs, this would minimize the cost of reports.
- \*Eric D. will bring these items up at the next PAPO team meeting and formalize them.
- Both paths are equally important.
- BLM monitors reference areas/leks for all work for grouse in the Anticline, sound and noise mitigation changes would be no different Reference leks and anticline are flown every year.
- Operators feel what was done in this study is not a requirement in the ROD, don't know where measurements were, if they were on a lek.
- Elements in this report are not portrayed enough for operators to make a clear interpretation.
- \*Due to sensitivity specific lek locations are not put out for public knowledge and this information can be made available to the operators upon official request to the WGFD but will not be included in the public report..
- Giving geographic coordinates, maps and monitoring locations for development locations where noise was monitored to the operators would be helpful.
- \*Operators can submit a letter to the BLM to request the needed information.
- With a written request, BLM could provide locations of noise measurements on leks to the operators if they were interested in independent verification of the data.
- Table 7 included all measurement locations that were not directly related to the lek locations.
- \*Table 1 had all reference locations and lek locations were removed. Skip can provide this table in the first draft report but removed it due to the proprietary information of lek locations.
- \*Operators are still interested in receiving written responses to the comments that were submitted.
- \*Today's meeting minutes will be posted on the PAPO web page.
- This Report is very important because of all of the groups that are looking at it. The more comments are documented the more beneficial it will be.
- Lisa Schwab is sitting in for Jenny Morton.

*A discussion was held concerning the equipment used, the levels of measurement, and the differences highlighted in the report.*

**Comments:**

Kelly: understands the items that McGregor peer review highlighted, and saw the response from Skip. There seems to be a disagreement in the scientific community about the monitoring equipment used and values, would like a third party involved to make a decision, don't post report as final with the current conflicts. Potentially fatal flaw issues have been presented by McGregor.

Skip: Stated it's not fair to compare his methodology to McGregor's, have done this for 25 years measuring noise in remote places, we agreed to a methodology and how to do it, feels good about his report, the term "fatal flaws" is an absurd comment. Howards review was disingenuous. His report is credible and Howard's opinions were insulting. His report was scientifically sound and another contractor measuring would get the same measurements. He was paid to give noise levels and he did what the contract called for.

- Feedback from manufactured of monitoring equipment, would be helpful to clarify the doubt cast on the report.
- McGregor used Type 2 equipment that measured only down to 25dba.
- Skips equipment was better Type 1 and he got more accurate, lower readings.
- \*Howards report did not acknowledge the noise levels were lower. Skips report did not address differences in equipment floor levels and should be modified to reflect this. He will address this, noise levels in rural areas without gas fields is 15 and below this his hard to measure without proper equipment.
- \*Skip will explain the methodology better to operators so conclusions will be repeatable.
- \*BLM, Game and Fish are working on a response to Kelly Bott's letter.

*A discussion was held concerning why a second wind screen was added and any potential affect it may have on the noise levels. This could be a significant error, why it was it done and is there is a better way to do it?*

## **Comments**

Skip: Pinedale is windy, and we didn't want winds in area to influence monitoring and wind speed over 5 meters per second can cause pressure over the microphone and give false noise values and should not use data with wind >11 mph according to the American National Standards Institute. In Pinedale a lot of data might have to be deleted due to wind over the microphone. Wind pressure and not true noise data, however, to delete it is not entirely reasonable because doing so would result in lower readings. Therefore, good but acoustically transparent wind screens were used. Additional tests were done with and without the screens to evaluate accuracy. They were placed about 3 meters apart and the tests demonstrated that additional wind screens did not affect the data, and therefore no data had to be deleted.

Wind screens were used for three reasons:

1. Minimize influence of wind on decimal data.
  2. Deer, rodents like to chew on wind screens, and we wanted to protect them.
  3. To keep the equipment secure from vandals (wind screen were camo and not very visible).
- Wind speeds were collected in both reference areas and collected in the treatment areas?

- Skip- some systems were rented and used in treatment area, and in reference areas had his own system. In all cases, wind screens made results more accurate.
- Initial review in reference areas showed wind speeds that were above .5 meters where miniscule (<0.02% of data).
- The height of the microphone, per protocols was set at 12” high and was not affected by wind speed.
- Systems used where the most effective for the money available.
- The L90 was used to establish background ambient; this is common and L90 helped eliminate grouse sounds to establish the ambient levels.
- Between 5am and 9am the L50 measure used in the gas field is influenced by the grouse.
- Providing the L90 and L50 comparison when grouse aren’t leking may be a good idea. Looking at L90 vs L50 may be an option.
- \*Skip can provide paired sets of tables: one as presented and second set of tables that will extract noise when grouse are leking to only represent the values of sound when the birds aren’t there.
- The protocol document recommended using L50 to measure median and L90 to measure ambient noise. Modifying this would mean not remaining as close as possible to the protocol document as requested by Operators.
- \*Skip will present any and all data as requested. His report was done using protocol recommendations, wanted to help, not mislead readers.
- \*\*Agreed to present all information in tables and make separate set of tables reflecting when the birds aren’t there.

#### 4. Next steps:

*A discussion was held concerning what will be addressed at the Annual Wildlife Planning meeting to be held at the BLM on February 19, 2014.*

#### **Comments and Action Items**

\* Shane can make a statement, based upon these discussions, that the Noise Report needs additional clarifications and revisions. The contractor is making revisions and an additional version will be provided.

\*The BLM will share reports/presentations with Operators and the public on the PAPO web page and can be viewed before the meeting.

The 2014 monitoring approach will be to monitor leks in the gas field. The baseline is established and data will be gathered at the same lek sites as last year. Contracts are renewed annually.

\*Therese H. will provide Kelly B. with the contract “scope of work” for 2014.

\*\*Skip will be available to meet with operators/others to explain noise monitoring methodology in February. The BLM would host this training/meeting the day before the wildlife planning meeting. Public notice will be given and staff should be informed.

\*Please return any written comments that are available to Aimee Davison now.

\*BLM will finalize meeting minutes; post them on the website, along with the comment letter from operators and PAPO response.

\*Aimee wants written comments to compare with report to be clear on translation. The issue around the noise (floor) equipment needs to be resolved. If elements in this report are secure and all agree ok, if differences remain should be resolved and scientific community should resolve this.

\*A Protocol will be developed by the state to address the noise monitoring standard across the state.

Shane: The information gathered was objective and reasonable, the report will be final, noise floor issue is critical, use of wind screens had bearing, ambient is being addressed, the key question is "what is the noise level that actually affects sage grouse?".

\*Question/comment responses will be drafted and returned to operators.

\*Skip would like to be called for any questions anyone may have. Ambient Measurement is not the issued, the noise level that affects grouse is critical.

Adjourn 11:10

Respectfully submitted by Regina Lester