

Pinedale Anticline Working Group

APPROVED

Meeting Minutes

1:00 PM • Thursday • November 5, 2009

Rendezvous Conference Room
Pinedale Field Office
1625 West Pine
Pinedale, Wyoming

Action Items

- Public comments should be accepted after each task group discussion during PAWG meetings. *On agenda.*
- Have Public Affairs add Cathy Purves to its media notices contact list. *Done.*
- Post operator ozone contingency plan DEQ spreadsheet on ROD Implementation webpage. *Done.*
- Post PAPO approved projects on ROD Implementation webpage until PAPO page is up. *Requested from PAPO.*
- Develop scope of work/budget for producing annual report incorporating all TG reports in layman's terms.

In Attendance

PAWG Members

In person: Cathy Purves (Chair/Environmental), Nylla Kunard (Town of Pinedale), Scott Smith (State of Wyoming), Bart Myers (Sublette County), Kevin Williams (Operators, Questar), Paul Hagenstein (Livestock Operators). Absent: Chris Corlis (Public), Jackson Schwabacher (Landowner), Public-at-Large vacancy.

PAWG Task Group Members

Erin Siems (SCWP, Reclamation), Adrienne Peterson (Reclamation), Stephanie Kessler (TWS, Air Quality), Jocelyn Moore (Water Resources).

BLM

Dave Crowley (Acting DFO), Jack Hanson (Acting FM), Jim Lucas (PAPO), Amber Robbins (Range Con), Roy Allen (Economist, Socioeconomic TG), Merry Gamper (Supervisory NRS, Water Resources TG), DeeJ Brown (Reclamation Specialist, Reclamation TG), Bill Wadsworth (Realty Specialist, Transportation TG).

Public

K. Bill Clark (Geomatrix), Kevin Frederick (DEQ), Kelly Bott (DEQ), Jim Sewell (Shell), Phil Barnes (Shell), Sandy Wise (Shell), Aimee Davison (Shell), Callie McKee (Ultra), Jennifer Frazier (DEQ, JIO), Linda Baker (UGRA), Elaine Crumpley (CURED), Meghan Durbrow (SCCD), Mary Lynn Worl (Citizen), Susan Kramer (Citizen), Michael Kramer (Citizen).

Press

Kaitlin McAvoy (Pinedale Roundup), Derek Farr (Sublette Examiner)

Meeting Minutes

Distributed Documents

Agenda

September 24, 2009 Draft Minutes
Water Resources Task Group Annual Report
DEQ Memo – Methodology for Development of LGS Equivalents
DEQ Memo – Visibility Threshold
DEQ – Public Meeting Notice – Results of the 2009 Upper Green River Basin Study
Liquids Gathering System Summary Table
2009 ROD Implementation Report to the Public

Approval of the Minutes

After changing the minutes to reflect that the PAWG wished to be kept in the loop for all actions, especially BLM/PAPO, Paul Hagenstein motioned to accept the minutes, as action items were amended, of the September 24, 2009 PAWG meeting. Kevin Williams seconded. The motion passed unanimously with the abstention of Nylla Kunard who had missed the September 24 meeting.

Pinedale Field Office Update

Chuck Otto was on a 30 to 120-day detail in Cedar City, Utah and that Jack Hanson was the acting Field Manager.

Public Comment

Stephanie Kessler asked Jim Lucas when the PAPO website would be up. He replied: I hope by the end of this month.

Task Group Updates

Water Resources

Jocelyn Moore: Obviously, water is an issue of great concern. At our last meeting, we had 34 attendees which was a record for our task group. It was a real challenge to take 13 meetings and five years of discussion and place it into this annual report, so if you have any questions, I'd be glad to address them. Basically, it includes some background on the task group, a summary of our meetings, what our recommendations were for last year, and a summary of the monitoring that's occurring – what's effective – and, on the last page, are our recommendations from our last meeting. One concern is "can people have copies of plans as they're being crafted by Geomatrix, operators, and agencies?" I don't know if it's considered public information or something that I can release. The task group suggested that the Geomatrix groundwater characterization could be put in the library. Sometimes information is put on the website – could we be notified when things are put on the web. When Brett Marshall presented the macroinvertebrate study, he noted that there is still sediment and erosion along the New Fork River. As a result, in the area between NF30 and NF19, he was noting an increase in various sediment loving worms. We are asking the PAWG to address the erosion sediment practices on the access road. We are also asking the PAWG to recommend a change to the groundwater sampling/monitoring process – to add sampling for naphthalene and 2-methyl-naphthalene when BTEX is sampled. Our last recommendation is that chlorides and fluorides be added to the groundwater sampling results. There are certain chemicals that can be tested for that can indicate the presence of fracking fluids and we'd like to include those results in the sampling results. We received 400 pages of data from the SCCD so not every bit was incorporated in our memo but we did have requests for additional monitoring and we need to look at the sampling analysis plan. Cathy Purves: Was there a SCCD summary of the 400 pages of data? JM: There was a groundwater and surface water summary. CP: Were they adequate summaries? JM: I think they gave a good overview. CP: Is the groundwater characterization an annual report or a summary of what you've done so far? Kbill Clark: These are the reports we've generated so far. Nylla Kunard: Do we just recommend or do we first ask if it's feasible for the BLM to do? CP: Are these sent out for public comments or just the results and where do you go from there? KC: These are very specific reports that are defined by

the process that will follow. Agency and operator comments have already been received. CP: But the public hasn't had a chance. JM: In the ROD, it states that the agencies and operators will develop the characterization...there is no public review of the study. Dave Crowley: Obviously, PAWG is the main chance to comment on anything. Having drafts available for comment and review would be a good idea. We could probably develop a way for folks to comment on it but it's not a NEPA document, it's an interagency document, but the PAWG has the strongest ability to influence. It's a requirement as a result of the ROD – the PAWG should be a place for public comment. CP: If the analysis results in important information, such as contamination, how does that get processed through the PAWG? Is there a summary? KC: There's probably a number of ways. At every water task group meeting, we're presenting a summary of our activities. We haven't collected a tremendous amount of data thus far that relates to contamination. Paul Hagenstein: I haven't heard anything yet about LEL alarms. JM: BLM did send a letter to operators stating that they were required to test those wells and that ones that couldn't be tested would be considered non-compliant. I believe that all those wells have been tested and some of them did not have any further detects. Merry Gamper: I wrote the letter. The letter did go out. All the wells have been tested. Some of the wells with LEL had detections, the majority of those wells did not have detection. Out of this year's sampling, there were two wells with additional LEL and they are in the process of being tested. CP: So we need that information on the web. MG: Last year's wells were sampled as soon as we got that letter out. Geomatrix did some of that sampling to try and identify the chemical nature of the gas. These two wells are now being sampled. CP: Are the results of those tests on the web? MG: The results from SCCD are but the further analysis from Geomatrix is not. Keep in mind that a lot of these recommendations will be addressed in the final interim plan. CP: This is the kind of information that is worthy of being put in our annual report. CP: On recommendation #3, what are you asking for? JM: This is the boat ramp access road and water is coming down the road and carving out dirt and gullies. Scott Smith: This is specific to the boat ramp at East Fork which will be upgraded next spring. I assume that the upgrade will include other erosion control structures. JM: There are other areas that are causing erosion but the task group can only recommend to the BLM on public land. Jim Lucas: We're going through the NEPA process on that project. JIO has put out a scoping notice. CP: PAWG has not heard about it. DC: It was a JIO project, outside of the Anticline. SS: On recommendation #4, Jocelyn, are you asking that BTEX not be secondary but primary? JM: The SCCD does its initial sampling and if there's a detection of hydrocarbons, they do a second sampling for BTEX. When the BTEX results are analyzed, it will be a better result if you are also testing for the naphthalene and 2-methyl-naphthalene. SS: On recommendation #5, are chlorides and fluorides not already included? JM: It's already being sampled for but on the results we get, it's never been listed as a column – just added to the sampling results. MG: We're looking for a correlation. It's a paperwork cleanup.

Bart Myers motioned to recommend that the BLM place a copy of the Geomatrix groundwater characterization study be placed in the Sublette County library. Paul Hagenstein seconded. The motion passed unanimously.

Paul Hagenstein motioned to recommend that the BLM notify the Water Resource Task Group when any report/deliverables regarding WRTG projects are placed on BLM website and do the same with all other task groups.

Nylla Kunard seconded. The motion passed unanimously.

Kevin Williams motioned to recommend that the BLM address erosion and sedimentation practices/soil stabilization controls on BLM access road to the boat ramp on the New Fork River between sampling sites NF19 and NF30. Scott Smith seconded. The motion passed unanimously.

Scott Smith motioned to recommend that the BLM allow a change in the groundwater sampling/monitoring process to add sampling for naphthalene and 2-methyl-naphthalene when BTEX is sampled. Paul Hagenstein seconded. The motion passed unanimously.

Paul Hagenstein motioned to recommend that the BLM require chlorides and fluorides be added to the groundwater sampling results. Scott Smith seconded. The motion passed unanimously.

GeoMatrix Presentation

Kbill Clark: I'm a hydro-geologist for Geomatrix. I'm going to provide a status report for our work on the Interim Groundwater Pollution Prevention Mitigation and Monitoring Plan. This might help set the framework for why we're

doing this series of studies. Section 4.2 of the ROD addresses groundwater resources and it's based on this guidance manual: The Regional Framework for Water Resources Monitoring Related to Energy Exploration and Development. It's a relatively recent 2007 USGS document and the BLM followed it when it put together the groundwater resources section of the ROD. It has three steps: first, compile existing information; second, develop and implement an interim plan; third, finalize the plan. The first step had already been done by the time the SEIS was published. Back in June 2007, a group of operators had sent out a request for proposals (RFP) for some firm to gather up all the data since 2001 by USGS, SCCD, Wyoming Geological Society, etc. We were fortunate to get that work and prepared a hydrogeologic conceptual model in March 2008. That document is appended to the SEIS and is on the BLM website. Step one of this regional framework has been completed. The writers of the ROD had some interesting foresight when they required that the BLM, EPA, DEQ, and the operators cooperatively develop the plan for step two. There was a three month deadline to include a funding strategy. Last December, the interim plan was published. The interim plan is not just about a groundwater study. It has a very important component for characterizing the groundwater system. The conceptual model report identified a number of data gaps – things no one knows about the groundwater system - how it interacts with the New Fork River and its tributaries. The second discrete task of the interim plan is to augment the existing monitoring program during the implementation of the interim plan, if necessary. The third is a biggie: to identify mitigation for all potential sources of contamination until such time that the potential for such contamination has been removed or alleviated. A good stab at this step was taken by the agencies a year ago when they developed a rainbow matrix of potential sources related to natural gas exploration and development. That is included in this interim plan. This whole study is about pollution prevention and mitigation. I'm going to move into the characterization study and try to provide a status of the plan, planning documents, deliverables, field work. This interim plan – you can think of it as a work plan, an overall guiding document. Last winter, we developed a project administration plan and four specific plans of study for four different categories of work. One of the components of this characterization process was scientific studies dealing with a large amount of data collected by different entities. There was a desire to make the database more useful to the public, agencies, and analysts. We worked with the BLM this spring to develop a data model for a geodatabase – which means all the data that was collected are related to geographic positions, X and Y, latitude and longitude, so that it's very easy to search and use that database now. The type of data we gathered included the SCCD database that they've been building for about five years. We combined tables and made them more functional. All databases have a source and that information is called metadata, which we included. Another discrete study that we completed last spring was related to the augmentation task of the interim plan. One of the problems in the data gaps was that there wasn't very accurate survey information for all the water wells, particularly elevation data which is needed to map the groundwater flow. So we selected a group of wells throughout the Anticline to survey along with seven surface water stations being monitored by the SCCD and established horizontal and vertical coordinates for those and measured concentrations of LEL (lower explosive limit), combustible gasses, measured depth of water – all to create a map. There are a number of different wells – domestic, industrial, stock, and surface water stations. Only seven of the 77 exhibited concentrations of the combustible gasses. One was located on the Mesa, four were in Warbonnet, one in Antelope, and one BLM stockwell in the Blue Rim. Two of those wells had concentrations of LEL at 100% of the LEL of methane. We took the survey data and prepared a preliminary flow map – preliminary because we haven't installed study wells yet that fill in the gaps – most of the industrial wells are along the Anticline as well as domestics along the River Corridor. This map shows an equal groundwater elevation and that groundwater is flowing southwest. A couple of interesting points that we're still trying to confirm or deny is that the New Fork River in the northern part of the study area appears to be losing water to the groundwater system but central portions seem to be gaining water from the groundwater system. Another study we've completed in the interim plan was which of the 300 wells in the SCCD that are sampled annually are actually credible and suitable for data purposes. Again, we wrote a plan of study that was approved by the agencies and followed a standard testing guide to select monitoring wells for these large characterization studies. We inventoried wells, then established and refined well selection criteria because we didn't want to ignore or eliminate a well due to bad selection criteria, then we screened these individual wells against very specific criteria. The number of wells that are currently within one mile of exploration or development activity is

394. Unfortunately, only 272 of those wells had a statement of completion issued from the state engineer's office. Before we could evaluate a well for suitability, we wanted to establish critical criteria that all wells would have to satisfy, such as: what was encountered during drilling, whether there was a well log available, how deep the well was, restrict the study to wells SCCD had already collected data on. From the common criteria, we had six specific data collection objectives: groundwater flow direction, both horizontal and vertical, whether the well would be suitable to evaluate interactions between ground and surface water, whether the well could be used to look at hydrologic properties, and whether the well was suitable for detecting any surface or subsurface releases of the field. Of the 394 wells, 272 had records. 100 wells had the critical screening criteria. With respect to the six data objectives, there were just a handful of wells which would be suitable. Five wells would be suitable for interactions. No wells that currently exist were found to be suitable for detecting surface releases to the groundwater primarily because none of the wells are screened across the water table – they're not shallow wells. Other work associated with the groundwater characterization activity is looking at surface water – such as springs – and changes in elevation and flow. There are two springs in the project area, Antelope Springs and Mesa Springs. In July, we conducted a reconnaissance – measured flow, GPS'ed location, collected water quality samples for comparison... We also did some instrumentation to record water level changes in the New Fork River and this will be compared to the groundwater hydrographs where we look at groundwater elevation changes with time. Moving on to the groundwater study as part of the characterization work... There are study wells we have installed and will be installing to collect specific pieces of information to fill in the data gaps identified in the conceptual model report and SEIS. We wanted to have wells that describe the interaction between surface and ground water and say something about the hydraulic properties so if there was a spill, we would know how rapidly groundwater would move and what would be at risk. There are 18 study well locations in the 300 square mile project area and they will be installed in three areas: federal land, land leased for gas wells, and 14 private land owners that we will be approaching later this month. There will be a total of 33 wells installed and 27 meters at depths up to 800 feet for a total of 9000 feet of drilling. We have seven locations on the East Fork, six on the New Fork, and a couple on the Green where we will be studying how groundwater flows to and from the river and look at water quality and elevation changes over time. Quite a distribution of wells. Who owns these study wells is a problem we've overcome with a lot of cooperation from the agencies and the operators. It was somewhat problematic that the operators who are funding these studies don't own the wells. DEQ's letter of early September defined sampling parameters and how they can be modified, how and when these wells would be plugged and abandoned, and who was responsible for any investigation and corrective action should any contamination be found. Moving on to permitting... The BLM's been helping us with grants and the state engineer with wells greater than 4" diameter. We also had to obtain right of access agreements with private land owners. We have a local contractor for drilling and a full-time geologist overseeing activities. We started drilling about three weeks ago and have five wells completed to date. We'll drill until it gets too cold. The last study I wanted to talk about is the flow study. We have 18 locations on the New Fork River from tributaries to the confluence. We have a team out doing flow measurements – we're trying to empirically determine the flow and conclude whether the New Fork River is gaining from or losing water to the groundwater system. We're also collecting water quality samples.

Public Comment

Mike Kramer: New Fork Social Club homeowner's meeting asked if we could ensure that there is no frac fluid contaminating our water wells and, if they are contaminated, who would pay for cleanup? We wrote a letter to USQ requesting a list of frac materials that could be toxic to humans and were referred to the final SEIS appendix 12 which has 47 chemicals alone on page one of seven. Some of those are generalized groups and we're no closer to finding out what specific chemicals are being used. We understand that it's proprietary. My question is that you listed suitable and credible wells but we would like to see two chemicals tested, naphthalene and 2-methyl-naphthalene. In our water task group, we found several wells that had DROs detects – diesel range organics. And these could be polycyclic aromatic hydrocarbons. What I would like to see you do is find two chemicals which are in the frac fluids. My criteria would be 1. They are not found in nature so that they have to be coming from frac fluids. 2. They are in the highest concentrations of chemicals used. 3. Which ones are the most toxic to humans. Merry Gamper: Are you wanting this as a result of the

study or as a result of the letter you received? MK: The letter referred me to the hazardous chemicals list in the SEIS but there's no specific information in there, which we expected since they're not going to tell us what's in those frac fluids. It's also in response to the DRO detects which we found in our sampling this year. If a chemical is being detected, we should find out what it is.

Paul Hagenstein motioned to recommend that the BLM investigate and address the question of two chemicals that meet the three criteria to prove the presence or absence of frac fluid. Scott Smith seconded. The motion passed unanimously.

Elaine Crumpley: If frac fluid is 99.5% safe, why do I have to go through Homeland Security for the MSDS sheet? I don't understand why they can't be readily available. No one wants to know proportions, we just want to know what those chemicals are if just to be prepared if there is an accident and we have to deal with fluids on a person. I've also been reading about green slurries. Is there any way they could be used here? Jim Sewell: I can ask offshore operations.

Cathy Purves: Several companies are experimenting with them now in Colorado. Stephanie Kessler: I really urge the PAWG and the agency to respond to Dr. Kramer's request. Mary Lynn Worl: We have many people who can't come and meet with the PAWG. Is there a way to break some of this information down and have a meeting that isn't so technical? Could we consider having a meeting just for public comment? Paul Hagenstein: I would suggest if they have a concern that they write a letter to the PAWG and mail it to the BLM. If we get it, we can act one way or another. They can sit out there and harp as much as they want but unless they put something down and put their name to it, it's irrelevant.

DEQ Update

Kevin Frederick: Mark Thiesse has taken another position with DEQ. We're currently in the process of trying to fill that vacancy certainly with an understanding that we will continue to participate in the task group and PAWG. It's possible but most optimistic that we would have a replacement by January.

Air Quality

Kelly Bott: I'm with DEQ-AQD. We have been acting in an advisory capacity to the air quality task group. The task group asked that the division talk about monitoring studies and all the work we're doing in Sublette County. At the November 19th meeting, Mark Kessler, our monitoring program supervisor will talk about all the different monitoring work and Dr. Field will be on hand to talk about the ozone sampler study that took place this past winter. Referring to the BLM annual report, the air quality section, "the BLM, DEQ, and operators with input from the EPA refine the NOX and VOC emissions inventory." Previous inventories that have been used for these analyses were thought to be very deficient and involved VOCs, which was why this was put in the ROD. The continental divide project which is a 9000 well project down by Rawlins is undergoing a large air quality analysis and they've developed a five county inventory with a comprehensive assessment of VOCs in that inventory. Those five counties are Sublette, Uinta, Lincoln, Sweetwater, and Carbon. That area is large enough that it covers the area we would analyze for Pinedale. This inventory will be used in the ozone modeling that is required per the ROD. That inventory went through vigorous quality assurance and we had a lot of involvement in it. We're feeling good about the five county inventory. In addition, we have gone through a vigorous process to revise and improve our own emissions inventory that we request from all the Sublette County operators. In fact, we're requesting that from all the operators in the proposed non-attainment area. This was an internal work group put together from our emissions staff, oil and gas permitting staff, we also had input from the planning group and from operators early on in the process. This was established to assess our emissions inventory and make sure we had all the sources in the field accounted for. When we started doing an annual inventory in 2004 in the Pinedale area only, it was one excel spreadsheet that included the big stuff but not the little sources that cumulatively add up to quite a lot. We revised that this year and that request went out to the operators in the proposed non-attainment area. The Pinedale operators were asked to submit it early so that we could consider it for the visibility milestone analysis. In addition, this ozone will supplement the five county inventory for the ozone analysis. Cathy

Purves: Is there a summary of the operator information? KB: Yes, it's available on request from our emissions inventory guy. He's working on compiling it into a single file so that the summaries are more accessible. CP: That would be something the public would want. KB: We've gone through a QA process and we've got those documents if you'd like to see those. We are continually improving our inventories and, as we see holes, we will work to fill them. The Jonah monitoring station is not up and running and will be relocated in January. When it was first located, it was a mid-field facility but as industry sprouted around it, there was no distance at all between the source and the monitor. It became a source specific monitor rather than an ambient monitor. We're relocating it to Jewel Spring to get a more ambient, regional type of monitoring data. Regarding the letter from Dave Finley to Chuck Otto, what the ROD says is that within twelve months of the ROD, impacts have to be no greater than 40 days of visibility impairment and that demonstrations have to be provided by the operators. In the EIS analysis, certain emissions were modeled and resulted in 40 days of visibility impairment. Since these were already modeled, if the operators could show us that their emissions field wide were lower than what was modeled, it stands to reason that the impacts would be lower. The reason that we feel 2008 data is acceptable to use is partially due to our interim permitting policy which gives guidance to industry on how to meet Chapter 6, Section 2 permitting requirements. This says that no new sources can contribute to worse air quality. They could either show us their source was not contributing to violations of the standard or they could offset their emissions – that's a 1.1 to 1 ratio for NOX, a 1.5 to 1 ratio for VOCs – or they could propose a different method. To date, all operators have used the offset approach. That being said, as new production sources come online, the emissions will intuitively be lower. We considered Anschutz, Yates, Newfield, Ultra, Shell and Questar. Newfield is not subject to the ROD but still subject to DEQ. The ROD requires that operators meet milestones by September 2009. A lot of the operators are going through drill rig permitting processes and upgrading drilling fleets so we asked USQ what they had done to upgrade the drill rigs by September 2009. Regardless of the BLM documents, all these wells as they are developed will have to go through the DEQ permitting process. Right now, they'll be looking at the interim policy with offsets as an option. The interim policy is based on Wyoming air quality standards and regulations that will not go away. With or without that policy, they cannot contribute to the maintenance or non-attainment of an air quality standard. Operators won't be able to get an air quality permit unless they can show they can meet air quality standards and regulations. Each well has to show DEQ that it will not have emissions that will contribute – it will be pretty hard to do unless they are actually reducing emissions. Contingency plans are required from the operators annually and they are due December 11, 2009. DEQ-AQD requested plans from all Sublette County operators last year. We got back 20+ participants which accounted for 97% or more of production in Sublette County. This year, we are going to expand it to all the proposed non-attainment area – I don't know that there will be a huge difference – and ask the local government agencies to participate. We will be issuing ozone advisories if the weather is conducive to ozone formation. We will be using the same mechanism for communication that we used last year, including media outlets, the DEQ website, our automated call system, a recorded message hotline 1-888-WYO-WDEQ. Again, those will be 24-hour advisories and we will reissue every 24 hours. We have been advertising for the compliance position that we got through the ROD as well as the monitoring data analyst position – one in Cheyenne, one in Pinedale. Jennifer Frazier is doing compliance at the moment. Our monitoring program has spent \$44k to date of the money allocated. For the LGS equivalent memo... The non-USQ operators had to come up with a plan for reducing emissions equivalent to the LGS by this year and implement it by next year. We defined what an LGS equivalent system would be by looking at permits from Shell and Ultra. Those permits talked about emissions increases associated with facilities that would process the liquids, as well as reduction in emissions due to reduced truck traffic and a reduction in flash emissions from removal of tanks from the sites. What we came up with is that Anschutz should be required to reduce 1.7 tons of VOCs, Newfield 11.7 tons, and Yates 7.1 tons. We suggested that those emission reductions should be added to the offset banks and that they should be reconciled by September of 2010 to meet the ROD. We received letters from all three on how they planned to meet this reduction and all are under consideration in permits. Merry Gamper: To expand on that a little bit, Yates and Anschutz are primarily relying on controlling emissions at specific locations, Newfield is in the planning stages of putting in an LGS.

Deej Brown: We are working with USGS and we're trying to get a date set so that we can get database issues resolved. The reclamation monitoring plan data sheets from appendix B will be part of that database. Our goal is to have it functioning this next field season. By the next PAWG meeting, we should have spreadsheet examples available. We will be having a task group meeting in January.

Socioeconomic

Roy Allen: The task group's original annual report recommended a ten-year rolling forecast. The idea was that the impacts felt here in Sublette County are driven by the number of people coming in to work in the oil and gas fields. We went to all the operators and asked for a ten-year forecast of drilling and tried to estimate the population associated with that drilling forecast. We would anticipate that population would change over time as price, market, and technology changes. (*Presenting slideshow.*) This last year, we sent the request out to 19 companies and 17 responded. The cumulative forecast indicated that drilling would be relatively flat. I converted these rig months into rigs and it's relatively flat over the next ten years. I took a look at growth rates before the oil and gas boom (that's the red portion of the graph) and estimated what the compound annual growth rate from that period in '95 and applied that annual growth rate from '96 forward. That's the estimated population you would get in the absence of an oil and gas boom. It's a natural growth rate. Working with Tex Taylor at the University of Wyoming, we ran a regression analysis on rig months to see if we couldn't estimate the total population based on drilling activity. What you're seeing here is based on the rolling forecast that came in – this is the population forecast for the next ten years. For all practical purposes, we're estimating that the population will be flat for the next ten year period through 2018. If you look at the normal growth rate by 2018 in the absence of any oil and gas boom, you'd be at about 7000. We're estimating 8550. What's happening is that the normal growth rate over time is starting to approach the forecast we're making based on the flat growth rate. To put this into perspective... Drilling is expected to be fairly constant through 2018 unless something changes in the market. Sublette County's population is expected to level off through 2018. The demand for local services and infrastructure will remain fairly flat. Housing...schools... All other impacts associated with rapid growth – once you flatten out the population – you can anticipate that those demands will flatten as well. The normal growth rate also occurs from second homes, tourism, outfitting, recreation... We hope to repeat this forecast every year. Kevin Williams: The first two years are obviously going to be way more accurate than third, fourth, and beyond. Scott Smith: You have contracts with these rigs, correct? KW: It varies from rig to rig. It could be from six months to five years. RA: When I was talking with the companies, they felt pretty comfortable with the first two years, maybe three, and then they were less certain beyond... The idea is that they know more about it than we do so I feel more comfortable getting this data from them than trying to generate it. KW: Everyone's drill times get consistently better the longer we do it so, obviously, if you're able to drill more wells with less rigs, that's a good thing. It's a best guess.

Public Comment

?: Can the PAPO propose projects for infrastructure based on the 2500 extra people over the next ten years? Jim Lucas: Yes. The mitigation board is open to project proposals like that.

Pinedale Anticline Project Area

Rig Count

There are currently 16 active rigs on the Anticline. Compared to activity at this time last year, there were 30.

Annual Report to the Public

Cathy Purves: We were talking about putting together the task group annual reports into a layman's format that we can all understand. We need to bring in someone. We need to pursue that in January. Chuck mentioned that there's funding under the PAWG which could be supported by PAPO funding. Dave Crowley: I imagine the PAWG will have to develop a scope of work and budget and see if we can do a requisition or put it out for bid.

SEIS ROD Implementation

Liquids Gathering System (LGS)

Bill Wadsworth: To date, we've authorized 135 miles of LGS pipe. Ultra is done constructing for this year. Shell is still under construction on pipes on the north of the river and working on its facility north of the river. Questar is tying in its water disposal well pipes at the moment. The other big thing is that Ultra has proposed a condensate line which runs from the Mesa down to LaBarge. It's out for public scoping right now – went out October 21st – it will remain open until November 23rd. Scott Smith: Why is Ultra wanting to run a condensate line from the Anticline to LaBarge when other operators have not taken that step? Callie McKee: There's one other line going out of the field carrying condensate and if you can't make a deal with that company, you need your own line.

Quarterly Planning Meeting

Jack Hanson: Hopefully, we'll have the minutes at some point. For the Avian Management Plan, we have a meeting on November 12th with the operators and FWS to further develop that. Kevin Williams: The operators reported on their ozone contingency plans from last year with changes, if any, for this year. Each operator has their own plans. Merry Gamper: They aren't available electronically but Kelly provided us a spreadsheet which we can post. Dave Crowley: Regarding the Lander Trail Programmatic Agreement, we're moving along. We have our next meeting on November 10th and have identified mitigation that we're hoping to work out and allow Shell and Ultra to continue their development along the Anticline and the Trail in a way that preserves the setting of the Trail. At the same time, we have identified a new 6.9 mile segment of the Lander Trail that had been forgotten. This is pretty neat from a historical perspective. This road was the first federally funded road west of the Mississippi and was built by the DOI to facilitate wagons moving to California and Oregon. Most other trails started as an animal trail, became a foot trail, then a wagon trail. In 1856, the government put together about \$30k to build this road from Nebraska to California. This is the central portion from South Pass to Fort Hall, Idaho. The route of the trail went about a mile and a half north of what we know of the road and passed by two springs, one of which is called the Cutoff Spring – which never made sense until now. Fortunately, we've preserved the setting of this other road – or most of it – without even knowing it was the road. The road was recorded as a historic ranch road but no one had done this sort of analysis and figured it out. It doesn't make Shell and Ultra's life easier out there but we've been doing a good job with the original trail and I think we can do so with this part.

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Pinedale Anticline Project Office (PAPO)

Jim Lucas: I apologize for our PAPO website not being up yet but by the end of the month, for sure. On September 29th, we had a PAPO Agency Manager's and Mitigation Fund Board meeting. The escrow agent presented the financial report, about eight million dollars are in the PAPO mitigation fund. As you know, the mitigation fund is paid into each year based on fiscal year well spuds. Numbers are being finalized but should be around 300 well spuds at \$7500 each, for approximately \$2.25 million into the mitigation fund. As far as applications, the board did approve Dr. Mark Fields' air quality study. The Sommers Grindstone Conservation Project protecting 19k acres was approved for \$6 million in addition to \$5 million commitment of the JIO. Overall, it's a \$30 million project and another \$10 million needs to come from other funding sources. There was a \$5 million proposal from the Museum of the Mountain Man for expansion. That was rejected. There was a documentary film proposal that was also rejected. Industry reps were also at the meeting and brought up industry concerns. One was reimbursement for the pre-ROD acquisition of the Murdoch Conservation Easement; USQ had contributed \$300k to the Green River Valley Land Trust and wanted reimbursement and credit for PAPO mitigation. The board approved a \$270k reimbursement for that easement since \$30k was given to the land trust for general operating costs. Again, the January and April PAPO meetings will be set very soon. Cathy Purves: It's apparent that these projects came right to the Board without going through a review process where some of

them would have been kicked out. Are you going to institute a more streamlined process for your team to review projects before they get to the board? Do you have a criteria format developed for evaluating projects? JL: Yes...we have wildlife criteria but no others. They'll be developed in conjunction with our strategic plan. CP: Is that plan done yet? JL: No, we're in the draft phase. We're hoping some studies come through in time to finish drafting for the January meeting. Paul Hagenstein: Who are they that accept or reject? JL: The PAPO Mitigation Board composed of the heads of BLM (Don Simpson), DEQ (John Corra), Dept of Ag (Jason Pernio), WGF (Steve Farrell), and a Sublette County Commissioner (Joel Bousman) appointed by the governor. CP: Would you explain to the PAWG about third party evaluations? JL: The NGOs are questioning our efforts on developing RFQ s for wildlife monitoring contracts...methodology, procedures, etc. We have submitted and the board has approved Wyoming Cooperative Fish and Wildlife Research Unit funding for third party review. CP: This was \$8400 to review the contracts and evaluate whether they were getting what was needed. Is all this information on the BLM website? Can we get it on? I don't have much faith that the PAPO website will be up by January. The public needs to see what the board is doing – even if you just put out the minutes for the PAPO board meeting. JL: I'm still working on the minutes. CP: And a list of approved projects. Even if just bullets and a quick summary. There's a *huge* delay here in trying to get information.

Recommendation Response

The BLM is accepting the PAWG recommendation to adopt the Cultural Resource Site Monitoring Plan as prepared by JIO Archaeologist Rob Schweitzer at the request of the PAWG Cultural Resource Task Group. A memo is being prepared to incorporate it into the BLM cultural staff's monitoring process.

Housekeeping

Public-at-Large Nominations

The status hasn't changed since the PAWG meeting in September. Gary Rees' nomination is still being vetted by Washington and Stephanie Kessler remains our alternate.

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Public Comment

Linda Baker: I like the idea of having a way for people to submit comments without attending a meeting. Anonymous comments should be accepted.

Adjournment

Nylla Kunard motioned to adjourn. Bart Myers seconded. The motion passed unanimously.
Meeting was adjourned at 5:20 pm.