AUDIOTAPED BOARD OF COUNTY COMMISSIONERS

OF GARFIELD COUNTY

SPECIAL MEETING

SAGE GROUSE - COORDINATING MEETING

108 8th Street, Room 100

Glenwood Springs, Colorado

April 4, 2013

Re: BLM SAGE GROUSE MEETING

APPEARANCES:

Commissioner John Martin, Chairman
Commissioner Tom Jankovsky
Commissioner Mike Samson
Commissioner Frank Hutfless

Fred Jarman, Director of Planning Community Development
Brad Petch, Colorado Parks and Wildlife
Kathy Griffin, Colorado Parks and Wildlife
Perry Will, Colorado Parks and Wildlife
Jim Cagney, Bureau of Land Management
Eric Petterson, Rocky Mountain Ecological Services
David Boyd, Public Affairs Specialist
Patty Gelatt, American Stewards of Liberty
Margaret Byfield, American Stewards of Liberty
Dr. Rob Ramey, Wildlife Science International
Zack Perdue, Pendo Solutions
Commissioner John Hill, Rio Blanco

(Audio starts at 6 minutes, 11 seconds.)

(Already in progress.)

COMMISSIONER JANKOVSKY: -- it didn't have any regulatory assurance. It was voluntary. There were concerns from the BLM on that part. We also had a meeting right after our August meetings with Parks and Wildlife.

And Parks and Wildlife helped us get a better understanding of the mapping, how the mapping was done, also the work they're doing on the field in the PPR area.

One thing that came out of that meeting was from Kathy was we heard you say that your map was from a 50,000-foot level and that drew some concerns. It had some concerns for us because we feel once this map gets in place, it will be maybe a little bit more rigid than the 50,000-foot level.

So with that I want to turn it over to -- and from there we've been a while. We've been since August without a meeting. That's because we've been doing a lot of work ourselves.

We've been looking at mapping, looking at the PPR plan, how can we improve that.

And with that, I'll turn it over to Fred Jarman and let him lead us here through the

discussion.

CHAIRMAN MARTIN: Did everybody get one of these? It's a handout and I'm hoping that we had enough copies. If you didn't get one, please let us know and we'll get one to you. Thank you. Fred.

MR. JARMAN: Okay, thank you, Chairman and thank you, Commissioners.

And as we start out, I really do, on behalf of the County, want to thank all of you for coming. This is pure coordination. This is getting together and working through these issues, which we're eager to do. And we hope you're of the same mindset.

So what you see on the screen here is a breakout really of what we want to talk about in the plan itself. So under Bullet 5 on the agenda, what you should have, so it's a background.

We're going to work through the implementation of this plan through coordination. We're going to walk through the mapping methodology with our team who's here.

Then back to the principles and policies in our plan, and then ultimately have a presentation on more of the science that goes into the basis for our planning. So we're eager to share

this with you.

As you all have had it already, we sent this, I guess -- right when it came out, we sent this to all the agencies. So we hope you've had a chance to look through it.

So as you understand and we stated in the plan, we consider this really a refinement of the PPR plan that CPW was tasked with completing which they did in 2008. There were a wide variety of stakeholders, perhaps 50 to 60 plus in that group.

And from 2008 to now, we believe that we've made a refinement of all of that, particularly in terms of mapping and the policy.

As you, of course, know, we are also working as a cooperating agency in that status with the BLM. And Tom already talked about that. But of that discussion, there are two key pieces, the NTT report and the CPW mapping which are both public documents which we're going to talk in great detail about today.

We also believe that our plan really does incorporate the best available science at this point. And I don't need to underscore that really anymore, but that is a common theme we hope that you'll see through this.

And one of the significant tenets of this is that it contains both public and private land management policies again that we believe are based on best available science, and then implemented through Coordination.

And this is Coordination with a capital C, not a small c. This is a specific term that is embedded within NEPA, and so that's why we're all here today. This is federal law at play.

So purpose and need of the plan, Tom covered this pretty well. I'm going to skip that first bullet point.

But the pictures really illustrate what he said, and that is the fact that we believe in Garfield County we have a very, very unique and different landscape than the rest of the national range or at least primarily the national range. And those photos sort of illustrate this.

We have a lot more about this later in the presentation, but ultimately the purpose of the plan is to provide private and public landowners with land management principles, policies, incentives and BMPs based on the best available science that are tailored to fit -- and that's the key piece of this -- tailored to fit Garfield County's unique

landscape and habitat characteristics for the betterment of the species.

And I want to also underscore those last four words, betterment of the species. That is still the goal of what we are all really trying to attempt to do here.

Of note you'll recognize -- some of you, particularly CPW folks, Kathy and Brad -- will note the map on the left on this screen is the habitat map that was used within the PPR plan. And that was completed in 2008.

And then we have what we're considering the CPW red map now or the priority and general habitat maps. And we did have a meeting with Kathy and Brad, CPW, here in the fall, I think it was September 5th, where we talked about this issue.

And it became very concerning to the Board of County Commissioners that there was such a large leap made from the map on the left -- so the black speckles show you what the habitat is there -- to the red map which is the priority. So it encompasses the entire lower Piceance area.

And so we were very concerned about that. And as Commissioner Jankovsky stated, that is why primarily we have spent so much time since that

meeting really trying to better understand what the science is behind that jump.

And so if you'll keep that as a major theme for today, we are very eager to talk to everybody about that and get some insight from you again as to where we go -- or where you have gone.

So in light of that, we took a flight, a helicopter flight, to really get up on the upper deck or the Roan Plateau. And what this map is showing -- and I apologize, the screen is yellow here, I don't know what the issue is, but it is what it is.

But here is Rifle to get you oriented, here is the I-70 corridor as it drops into Mesa County, and here is Parachute.

So we left Rifle and then flew along this black line which is the flight path. This is the exact GPS location of the flight path.

So up onto the upper deck here across preliminary priority habitat up into Rio Blanco County, which is this area here, then back down, and then back into general habitat and took a left-hand turn here and then came back down into Rifle.

So we really wanted to get up in the air and fly it very closely to see, okay, how can we get

a better understanding. That's our closest, given the snow, and what have you.

So from that, these were pictures taken from that flight. And I think pictures are worth a thousand words here. It gives you a very good sense of what we saw, which is critical to reinforcing what we believe is a very, very different landscape in Garfield County as compared to Wyoming, by way of example.

So the shot to the lower right, to be clear, is not up on the Piceance. That's Pinedale, Wyoming region. That's actually a photo from the BLM.

But the photo in the upper left is priority habitat as mapped in the red map by CPW. So it gives you a sense of the difference.

So seeing this all from the air, we became even more concerned. And we decided to launch deeply into mapping with some fairly sophisticated modeling and of the same area. We decided to use the same plan area in the plan as the CPW outlined within their map, and that's that red area there.

And the punch line of all of this, which we'll get to, but wanted to give you a little bit up front, you'll see the PPR map on the lower left.

And then after our modeling efforts, we have what is up on the upper right.

And our team will get into great detail on how we arrived at what that suitable habitat is. That's the red in the upper right. So we believe there's a major difference from 220 (sic) acres of habitat down to about 15 -- anywhere from 15,000 to 28,000, but you get the sense here it's somewhere between 7 and 13 percent of the entire 220,000 acres. So it's a remarkable difference.

So from that we decided to readjust and implement, craft our plan and then choose a way to implement that plan. So I'm going to turn it over to Margaret here and have her walk you through implementation.

MS. BYFIELD: Okay, one of the first problems that we really identified is that there's a lot of different pieces to the pie as it goes towards managing the Sage Grouse. You have different agencies that have different elements of the management of the species.

So BLM has habitat management on the federal lands. Of course, Colorado Parks and Wildlife has species management. And then Fish and Wildlife Service has to look at whether or not it

needs to put in a layer of federal management and take over control of the species at the federal level if it listed it as endangered.

So there's a lot of different hands in the pie. And one of the things that we really wanted to solve and in looking at all the approaches is the approaches have been from a real broad-brush approach.

In other words, Colorado is looking at it from the Colorado perspective; BLM is looking at it from the national perspective with the NTT report direction; Fish and Wildlife Service, of course, at the national level, as well.

And we wanted to bring it back to how the Sage Grouse is managed in Garfield County comes from a local perspective that takes into account the local needs, the local landscapes, so that whatever conservation measures are put in here are actually going to work here and not harm the species. So that's why we decided that the implementing element of the plan was going to be through Coordination.

Because all of the agencies have a federal directive to coordinate with the local governments so -- particularly, specifically, and I'll just walk through this, the Bureau of Land Management through

FLPMA primarily is required to keep apprised of the plan, give consideration to the plan, meaningfully involve the County in its planning activities, work to resolve conflicts with the plan, and make its plan and policies consistent with the local plan.

Fish and Wildlife Service has the obligation under the Endangered Species Act to consider all local efforts that are being made prior to making a determination. So everything that Garfield County is doing here is something that you need to be aware of as well so that that can be taken into account in the determination process.

And the state agencies, since Garfield County has the land use authority, the coordination with the state agencies is a natural fit to work through a lot of these issues as well.

So we see the Garfield County plan serving as the central plan that then is a basis for all the other plans that are developed, conservation measures that are developed. Everything else that's developed from it look back to the Garfield plan as really the comprehensive plan to be consistent with, of course to give consideration to.

And if there is conflict between the policies, we have, you know, a written document now

that we can start working through those conflicts to resolve those conflicts.

So a lot of the purpose of this meeting and kind of going through this plan for you guys is that one of the key things about the plan as to how it's going to be implemented is we're looking at doing an annual review each year with all of the agencies.

And we kind of see this meeting as our first meeting of that nature where we can take a look at and go through the impacts to the species here locally, what the habitat looks like, reassess if the conservation measures are working or are effective and being put in place, also take into account any new science.

It's an adaptive management plan, and that's critical to the implementation of it. And one of the great things about the County is that the County can move very quickly.

If a change needs to be made, it can make that change very quickly by really agreement of the Board and through resolution. And so if something major needs to change, it can be done quickly on the ground here in Garfield County.

And so going through the review process

looking at changing, if necessary, changing conservation measures in the plan based on the science and based on what we're learning from you and also from the private landowners.

And then, you know, if changes are being made, prepare a draft and get that out to all of you to take a look at and consider and feedback comments to the County. And then update those policies and conservation measures as warranted.

The same kind of process is really what the County plans do also with private landowners. We really want private landowners engaged in this process. They own most of the Sage Grouse habitat and are just critical to the whole process.

And so the plan serves for the private landowners to really support what they're already doing and encourage and help them to put in the conservation measures what we're seeing, after looking at the science and everything, we find is to be the best approach.

So that's kind of a summary of how we see this coming together. An annual review with all of the agencies, a science review can be done at any time, and continual coordination.

In other words, it's not just one annual

review meeting but it's continual coordination with the agencies so that the County is always apprised of what is happening with the species on the ground.

So to kind of summarize really what we're talking about, the plan is to inform all the agencies -- and what we're really trying to do today -- to inform all the agencies of the content of the Garfield County Sage Grouse plan and answer the questions that you may have, concerns you may have.

Begin the process of implementing this plan, we see this as really the first step. And hopefully today you guys can start pointing out any concerns you have, any conflicts you have with the policies, and we can start working through the resolution of those.

And we also need to obtain an answer as to whether the Garfield County plan will be included as an alternative in the BLM EIS, which has been requested.

And then discuss the key concerns we have with the science that's being relied on through both the NTT report and also the candidate determination notice published by the Fish and Wildlife Service in 2010.

MR. JARMAN: Okay, thanks, Margaret.

So where we're going to head now is, I'm going to have Zack Perdue from Pendo Solutions and Eric Petterson from Rocky Mountain Ecological Services come up and spend some time walking through the methodology behind the mapping and some of the science related to that, which is really the -- it's one of the main foundations of our plan.

And so I'm going to turn it over to Zack here and let him drive as he would like.

MR. PERDUE: All right, so Eric and I were hired by Garfield County to perform an (inaudible) assessment of the suitability of potential Greater Sage Grouse habitat on the PPR.

So to do this, we decided to employ two different methods of what's called a multi-criteria overlay analyses, which included weighted overlay as well as fuzzy overlay modeling.

Real briefly, a weighted overlay model is something a lot of you are probably very familiar with. They are commonly known as habitat suitability indices. And they basically function by scaling, weighting and then compositing diverse spatial data sets to measure or gauge the level of suitability at a particular location.

Likewise, a fuzzy overlay model applies

something that's called fuzzy logic to spatial data to measure the suitability of an area. Fuzzy logic is something that's based on set theory and it provides a more flexible method for combining the criteria data sets, and it provides a method also for handling vagueness and imprecision in spatial data.

So before we started the model development, the first step was to develop all the criteria that we were going to let influence the selection of suitable habitat.

So Eric and I both performed a very extensive literature review of all the available published and peer-reviewed studies that are out there right now that begin to describe habitat characteristics of the Greater Sage Grouse.

A number of these were national studies. Some of them occurred in Washington, Idaho, Nevada. But we tiered heavily towards the three studies that you see listed as items 1, 2 and 3 under the heading No. 3 there, which were Walker's paper, Apa's paper and Heather Sauls' paper.

Those were all relatively contemporary studies that had been performed, and they were also studies that were performed specific to the PPR

region. So it had a lot of really good information that described the specific characteristics of the PPR population.

So while we had an extensive list of criteria to choose from, some of the information was decades old, some of it was contradictory. And so we tried to devise a method to kind of boil down the most common criteria that would help us measure general habitat, not looking at seasonal habitats.

So we wanted to capture where these birds were in the summer, in the fall, in the spring, and so on and so forth.

So from that, what we determined were that the four major contributing criteria are listed underneath No. 4 here, we determined slope, ranges, canopy cover, vegetation types and distances to forested areas as dominant criteria to feed in as model inputs.

So real briefly, the data that we employed in the models, the slope was derived from 10-meter USGS net data. The canopy cover was acquired directly from the Landfire data distribution site. And then, of course, we had a variety of publicly available vegetation data sets to look at and possibly employ in the modeling.

We ultimately looked at four, again listed under heading No. 3 here. The first two, Remap (phonetic) and NLCD, we felt didn't break down the vegetation classification intricately enough.

They seemed to be very broad classifications. In fact, most of the shrubling communities in there were simply typed as a sagebrush community irrespective of the presence of serviceberries, snowberries, so on and so forth.

So after kind of putting those to the side, we looked at the CVCP and the Landfire data. Both of these data sets were far more accurate in defining the intricate nature of the veg communities up there on the PPR study area.

And what we wanted to do initially was to use the CVCP data because it seems to be the data that's been most heavily employed in the models that have been performed to date.

However, when we performed an assessment of the data as compared to Landfire, we felt that the delineations present in the Landfire data as they pertained to sage communities as well as forested areas had increased accuracy as compared to the CVCP.

So ultimately we chose the Landfire data

as the primary publicly available vegetation data source to employ in the models.

So at this point we had reviewed multiple data sets and developed the criteria list. And from that, we had established that, you know, through observation we had noticed numerous issues with the accuracy of the geometry and attribute typing of the vegetation data. And it's also been observed and noted in other relevant studies.

Another issue with the employment of the CVCP data set was that it appears there's a discrepancy between the data sets that were employed. And the only thing I can assume is that a previous CVCP data set was employed in the Walker, Sauls models, and so on and so forth, and that's subsequently been updated.

That conclusion is made simply by comparing the cover types that are reported in those reports as compared to what we have in our data within the study area. And there's a very broad discrepancy between the description of the cover types.

Lastly, both the CVCP and the Landfire data are relatively coarse data sets. CVCP is 25-meter resolution. Landfire is 30-meter

resolution data.

So with all this in mind, Garfield County wanted to ensure that they had the most accurate vegetation data set to work with, to not only model with but also to employ in future exercises to develop conservation measures within the PPR.

So to do that, we started a separate process whereby we performed supervised image classification process on color-infrared NAIP photography that was acquired in 2011. We performed this classification at a 2-meter resolution with the intent of identifying the major vegetation communities as they applied to the suitability of the Greater Sage Grouse habitat.

So with that in mind, we made three big pushes in this exercise which were to accurately identify and delineate sagebrush and mixed mountain shrub communities.

We also wanted to identify the areas of encroachment from the woody shrublands and attempt to quantify that to the extent possible in those transition zones.

And, lastly, we wanted to accurately delineate the forested zones given the fact that it's indicated that it's a relatively dominant

criteria, influential criteria by Walker's model.

And so we wanted to ensure that given the fragmentation of the habitat up there, and the linear nature that these communities exist in that the delineation of the forested canopy was accurate so as not to unduly constrain or pull back from accurate results.

So at this moment -- I'm sorry, we're missing a table here. This should have a table of the vegetation summary on it.

But at this moment we are actually reviewing -- we're performing a manual review of the data results against high resolution 30-centimeter photography as well as limited available transect data that we have within the study area.

We're also employing species prediction based on other baseline data sets including soils, aspects, elevation. And then in the spring we're going to perform additional transects and field observations to try to tighten up and validate the accuracy of the data.

The field efforts will largely concentrate on looking at what we have mapped as mixed mountain shrubland communities and the marginal habitats that

exist on the perimeters of the sage and grassland communities.

So with all that said, we had our criteria developed. We had compiled our data. We had even created new vegetation data set to employ in the modeling. And so we started the modeling process.

And at this point we've actually produced numerous models and have the intent of completing additional models in the future.

Ultimately, our goal is to continually refine the parameters of the model and the criteria that influence the model based on best available science and expert opinion to try to really hone in on what the suitability looks like on the PPR.

In the future we will be building more robust, sophisticated models that incorporate additional criteria to map and locate seasonal habitat locations within the PPR.

But real briefly, the list that you see up here on the slide, this simply illustrates the models that have been completed to date, the sequence in which they were performed, the vegetation data source that was utilized in the model as well as the model method. And to the right, there's just a brief reason for why the model

was performed.

So moving through that real briefly, models 1 and 2 employed the Landfire vegetation data set. They were both products of a habitat suitability index model.

The first one was run very early on, and that was simply to establish a baseline for the model results using a very generic set of criteria.

Again, No. 2 kind of built on the same parameters of Model 1, but we did change some of the criteria, specifically as it pertained to canopy cover and slope. And that was based on some information that we saw in the Apa paper from 2010.

Models 3 and 4 were performed on the exact same criteria and framework that Model 2 was. The only change in the model was the substitution of the vegetation data sets.

And then, lastly, No. 5 was a model that employed the fuzzy overlay process. We used the Remap vegetation in that, and that was performed because it's a different modeling technique, we would expect different results.

And it has particular significance to this habitat because of the vagueness and the imprecision in the data and the fact that we know that this

population up here likes to get out to the perimeter of these sage zones and move in marginally to some of the woody shrublands that encroach on these communities.

So before showing the results of the models, real briefly the HSI model produced results on a scale of zero to ten. The fuzzy overlay model results were presented on a scale of zero to one. On both of those indices, the higher values indicate higher levels of suitability.

Real briefly, this is the criteria matrix that was employed in the Model 1, in the HSI model. I will let you guys just briefly look at that. As you can see, it's fairly generic in its description of canopy cover.

We allowed for a pretty conservative estimate of slope ranges. And the distance to forest and vegetation communities were established almost directly from Walker's paper.

Models 2, 3 and 4, here is the criteria that we employed in these models. As you can see, the changes that we made were to tighten up slope constraints based on information in Apa's paper as well as Heather Sauls' model.

And we also better distinguished

differences in the canopy cover. And again this came from specific information from the Apa paper.

And then No. 5, Model 5, was a fuzzy overlay model. And a fuzzy overlay model doesn't employ weights and rankings in a similar manner that an HSI model does.

What it does is it assigns membership to the data. And so real briefly, without getting into a lot of technical explanation of this, the membership functions that we used to assign to the different criteria were we used a (inaudible) soil membership function for slope whereby we established that the 50 percent membership level was at the 20 percent slope range and allowed higher membership to assign to lower slope values.

Vegetation types and canopy cover were largely employed almost in the same manner that they were in the HSI models. The only difference was that we performed nearest neighbor functions to smooth transition zones between the vegetation communities.

Distance to forest area was assigned a linear membership function which basically increased membership to that class as a function of distance as you moved away from the forested areas.

And we did something similar with land forms as well which it bears noting, I guess, that that was one thing that we had changed with this model was incorporating land form as a variable. The previous models had utilized land form, but it was utilized as a filter process. It was not employed as a variable directly in the model.

But the land forms utilize topological position indices values of zero to 75, again with a linear membership function that assigns higher membership to higher TPI values. At the point that we exceeded 75, we assigned full membership which basically indicated you are on the top of the ridge.

Real briefly, we have summarized the results of each of the model iterations. To explain the headings, as we move left to right, we have the raw acres, filtered acres, private lands and BLM lands. Each reports an acreage and a percentage.

Regarding the raw acres, those were the native results of each model iteration unmodified. So nothing was filtered or anything. That's the direct return of the model.

To the right is the percent which is expressed as an area of the broader study area, which is approximately 221,000 acres.

To the right of that, we have filtered acreages whereby -- as you can see in models 1 through 4, we performed some filtering that was relatively arbitrary.

But the attempt was to eliminate some of the smaller disconnected habitat patches that were being returned in the model. As well as, as I just said, the land form data was employed in models 1 through 4 as a filter technique to remove drainage areas and swales as suitable habitat zones.

Moving further to the right, we report the filtered result acreages as they pertain to private lands and BLM lands. And the percentage to the right of those are a percentage of the mapped suitable habitat for that model result. So we'll let you look at those for a moment.

So real briefly, we will cycle through some maps of Model 1 results. After that, we have Model 4. And then we also have Model 5, which is the fuzzy model results.

Yeah, Model 4 is the model that is being represented in the Garfield County plan at this time.

So ultimately we went through and we performed these different modeling exercises. And

we ultimately had five different results that were showing the habitat as occurring -- or representing anywhere from 7 to 13 percent of the project area based on the models that have performed to date.

Ultimately what we wanted to do was perform a comparison of these model results with the result of Walker's study, Rice's study, as well as Heather Sauls' model. Unfortunately, we didn't have any spatial data to perform any kind of correlation and quantify any kind of differences or correlation.

However, as you can see on the maps here, this is similar to what Fred had up there earlier, on the left we're representing the results of the fine scale habitat mapping that was included in the 2008 PPR plan. And to the right is one of the model results, and I believe that one is the fuzzy model results.

And as you just visually compare those, looking back and forth, you can see that there's a high degree of correlation occurring in where these areas are being mapped. And we also have this occurrence with Walker's results as well.

His results are a little bit more coarse than what you see on the left-hand side. Nevertheless, there's still a high degree of

correlation between the results, or visually it appears that there's a high degree of correlation.

We then sought to compare the results to the Rice model results, as our understanding was that was the data set that was primarily used to drive the development of the PPH and PGH data sets.

Again we didn't have any data available to perform any kind of a direct comparison, so we had to perform a manual observation and review of the data. And this was further hindered with her data because the only images that we had were very small images on the page that were pretty coarse resolution, so it was difficult to see detail and the results.

However, with that being said, based on what we were able to see, our observations would suggest that there was a marginal correlation between our results and the results of her breeding season model. But those results were further reduced in terms of correlation when compared to the results of her summer habitat modeling.

Ultimately we felt that the Rice model results appeared pretty coarse and overstated by comparison not only to our model results but some of the other model results performed by CPW and BLM.

Now the difference in the contrast in those results are likely fairly easily explained, and that's likely because of the resolution of the data that was employed in the model. Her model used a 1-kilometer cell resolution (inaudible) data which would begin to explain the coarseness in the results.

But in addition, she also used different modeling criteria than what we used and what Walker used and Heather Sauls used. Her model seemed to employ different variables that described percent proportion of different vegetation communities, and they were resampled at a 1-kilometer cell resolution and aggregated against the CVCP data.

So with that review and those modeling exercises in place, Garfield County basically said, okay, so what's your assessment of the accuracy of the PPH and the PGH data set, and can you follow the methods that have been employed to reproduce it?

And so we started by looking at the data citation for the data set obtained from CPW's website. And the data citation basically lists three sources as being used to develop the PPH and PGH data set.

The first was the results of the Rice

model, which is quoted there to the right. Secondarily, it indicates that production areas were utilized, and they are defined as 4-mile buffers around leks which have been active within the last ten years.

And then, lastly, it would appear that the broader perimeter is defined by a data layer that is maintained by CPW called occupied range.

And in the citation it states that occupied range is defined as areas of suitable habitat known to be used by Sage Grouse within the last ten years from the date of mapping.

Areas of suitable habitat contiguous with areas of known use which do not have effective barriers to Sage Grouse movement from known use areas are mapped as occupied habitat unless specific information exists that document the lack of Sage Grouse use.

After reading the citation and looking at the data that we had available, we were not able to reproduce the results of the PPH and PGH delineations. And so following are a few slides that indicate some of our observations of the data set.

First and foremost, we looked at the

priority habitat delineations. Those were primarily driven by the location of the production zones which are established by active lek locations.

What we noticed was that we had, based on the available lek data that we currently have, we noticed a spatial discrepancy in the perimeter of those 4-mile buffer areas in the data.

In addition, we noticed that there were exemptions that were allowed within the 4-mile buffer priority areas that we didn't have a reason for explaining the exemptions.

And, lastly, we also observed that there were spatial discrepancies between the priority habitat delineations and the PPH and PGH data set as compared to the Greater Sage Grouse production area data set that is maintained by CPW.

The second observation that we made was that the PPH, PGH data set includes very expansive areas that don't appear to meet the definition of occupied range as it's reported in the data citation.

So, as you can see, above we've got a representation of the PPH and PGH areas. A precondition of meeting the occupied range, as it was stated in the definition, was that it must be

suitable habitat.

As we've mapped and as Walker and Sauls have mapped in their report, there are enormous expansive areas in here that are not returned as suitable habitat under a variety of models that have been run. However, the PGH and the PPH areas have captured these interstitial areas and delineated them as PPH and PGH habitat.

And by and large, these areas are -- particularly through the middle of the unit, there's a pretty continuous patch of forested vegetation with woody shrublands which has been observed in multiple data sets, observed in the field, and so on and so forth.

And then, lastly, an observation that we made, again this was -- you know, the ability to truly assess this was hindered by the image that we had available of Rice's report.

But we did notice that there was a discrepancy in the delineation of the area that she had shown as Greater Sage Grouse estimated range as compared to the delineation of the PPH and PGH data set occurring in the southeast area of the study area kind of shown in the circles there.

And my apologies, it is difficult to see

it on the left-hand side, but the area that we're representing is shown better here on the right.

And I'm going to turn that back over to Fred. Thank you.

MR. JARMAN: Okay, thanks, Zack. This is the slide here. And the image to the left is directly out of Mindy Rice's, Dr. Mindy Rice's paper. I want to make sure everybody understood that.

And so if you drill down into this, that's where you get to those 1-kilometer grid cells versus the further refined, much more refined analysis that we have performed.

So with all that being said, ultimately to draw some conclusions from where we are with the mapping, we have in our opinion the best reproducible scientific data consistent with the results of the two previous CPW studies and the BLM study.

And that's probably one of the most key issues is the fact that it is reproducible, whereas the others we have not been able to do that.

Secondly, we believe that the BLM EIS is relying on a map supplied by CPW that is flawed in its modeling. It contains large areas of

non-habitat and is not reproducible.

The third bullet here is critical in the sense that under federal law, any EIS can only contain information that is publicly available for review.

So, by way of example, if the red map is to be included in the draft EIS or whatever EIS that does come out, any data that -- I should say all of the data that's required to reproduce that map needs to also be in the EIS. And right now, we believe that's an enormous flaw and enormous hole in the process that we've had to date.

And then, No. 4, we have asked Parks and Wildlife for this data on numerous occasions and then followed up even with a formal CORA request and have been denied for that information. So CORA is Colorado Open Records Act.

So we have tried to pursue that information, and we've simply been refused.

So with that, we're going to jump into the plans and principles. And we wanted -- this is by design -- we wanted to make sure you understood all of the science behind the mapping which is critical.

Because our whole approach is to say we want to have very good sound conservation policies,

but they need to be based off of what we think is the best available science. And so we're going to work through that, which is why we went through the mapping exercise first.

And as we do this, Margaret and I are probably going to tag-team back and forth on this. But critical, as she explained earlier, is to identify the conflicts between our plan and policy and what, by way of example, the NTT has out there.

And so by way of the first one -- this is in the approved plan under the principles category, but the first one is we have a naturally fragmented habitat, and it's clearly a peripheral population.

And I'm not going to read all this white. This is death by PowerPoint, so I apologize. But it is in the handout and it's also in the plan verbatim.

But ultimately we believe this conflicts with the NTT objective which is to achieve the following conditions in the priority and general habitat which is, and I will quote this, to maintain or increase current populations, manage and restore priority areas so that at least 70 percent of the land cover provides adequate sagebrush habitat to meet Sage Grouse needs.

MS. BYFIELD: And I think the point, just to emphasize the point, is that is just physically impossible in Garfield County.

MR. JARMAN: So another example is the principle for multiple use management. Of course, as Jim and David will tell you, the mission of their agency is to promote and enhance multiple uses for the public.

And we believe that that conflicts with the goal of the, quote, new paradigm that is talked about in the NTT which is management priorities will need to be shifted and balanced to maximize benefits to Sage Grouse habitats and populations in priority habitats.

So it's a direct intended left-hand turn away from the very mission that the BLM has.

No. 3, no infringement on private property rights. And so we believe this conflicts with the NTT where they indicate manage priority Sage Grouse habitat so that discrete anthropogenic disturbances, human disturbances, cover less than 3 percent of the total Sage Grouse habitat regardless of ownership.

MS. BYFIELD: I think the key point there is that in doing the 3 percent disturbance, when you take into account everything happening on private

land as well, you're really infringing on the property rights.

That your management, particularly to the BLM, management responsibility is on the federal lands, but trying to use all the private lands in order to get to your 3 percent disturbance infringes on that. And so it's in conflict with the County's policy.

MR. JARMAN: Which is a nice tangent really to this next one, which is human disturbances kept at a minimum.

And here we believe this conflicts with NTT where it states the overall objective is to protect priority Sage Grouse habitats from human disturbances that will reduce distribution or abundance of Sage Grouse. So along those same lines.

And in the plan principles, we wanted to point out a few key ones here. Certainly the area we're talking about has, I would say, a significant amount of active fluid mineral development and the potential for certainly future fluid mineral development.

And along those lines, we have a policy really that is to close suitable habitats. So again

using our mapping again, if you go back to the red speckled map, on federal lands, mandatory on federal lands, as determined by our mapping to future surface disturbance unless the fluid resource cannot be extracted without minimal disturbance, surface disturbance. That's key that it's surface.

So in this case, the BMPs would be followed and, if necessary, mitigation used to ensure a no net loss of Sage Grouse habitat and no deleterious demographic effect on the population.

In addition to that closing of suitable habitat, we have a .6 mile or 1-kilometer NSO around active leks outside of those suitable habitat areas in the event that those occur. So it's really a two-pronged approach here with avoidance and the NSO as compared to the NTT.

Continuing on, these are points that I know that Dr. Ramey is going to speak to but, just briefly, we believe that we are focusing this on a cause-and-effect approach rather than a one-size-fits-all. That cause and effect is from the threat, a specific threat, again based on best available science.

Rob, feel free to jump in when you like to here.

Secondly, we recognize that there has been a great deal of technological innovation and efficiency reducing impacts that were previously harmful to wildlife. Not only that, but we believe a lot of these are temporary so they're not long lasting forever. And that is a key component that is important here.

Again, we believe we are relying on design of mitigation that is tailored to the circumstances that are unique here. Again, it's not the one size fits all. It just simply doesn't work with the terrain that Garfield County has.

And we believe that, frankly, the incentive or conservation activities by the private landowner work better than the purely regulatory approach on those private lands.

Keep moving here and move into the significance of the plan policies. Rob, do you want to speak to these here?

DR. RAMEY: Having worked on endangered species for 30-plus years, I can say that addressing specific cause-and-effect mechanisms that underlie each threat is imperative in order to be successful in conserving any species.

And so that's one significant departure of

this plan versus some of the blanket prescriptions that we're seeing in, for example, some of the BLM and NTT planning prescriptions.

Another fundamental problem and something that I'll talk a little bit more on in a moment is that technological innovations have been continually progressing.

So, for example, one of the primary identified threats in the 2010 listing decision in the National Technical Team report by the BLM and the Conservation Objectives Team report recently released is Oil and Gas development to Sage Grouse.

And one of the false perceptions that seems to persist in the literature, and unfortunately in some regulatory documents such as those I just mentioned, is that the impacts today are the same as at the time of some of the studies that were done utilizing older technologies, particularly those that were in use in the 1990s.

It has continually changed. There is directional and horizontal drilling that reduces surface impacts. There's liquid gathering systems that reduce the overall level of activity.

Here in the Piceance Basin, Exxon reduced by 65,000 trucks a year the traffic that is used.

The utilization of telemetry systems so that there doesn't have to be as much traffic.

All of these combined, along with electrification of fields and also trying to deal with providing -- having predators such as ravens near sights used by humans are all being dealt with, and most of this is being dealt with voluntarily.

So we need to advance our knowledge based on this newer information, that it's not the same situation as the past.

MR. JARMAN: And, Rob, we kind of covered up -- I apologize. That was very good. It's a duplication, though, and in the interest of time we want to keep moving because you're going to hit this pretty hard here in a little bit.

So I just covered a few more of these so I'm going to keep going here to our final punchlist here, and then we'll turn it over to you so that you can dive deeper into that.

So ultimately the key summary points for policies, principles that are in this plan, we believe that the NTT report takes a political approach of narrowing policy options. And the Garfield County plan takes a scientific approach really expanding policy options.

And, secondly, the plan addresses the cause-and-effect mechanisms, and Rob just touched on that, as I did too, rather than this one-size-fits-all blanket set of tools that don't do a good job of understanding or applying to a local circumstance.

And we believe again, you can't underscore it any more, we have a very different local circumstance that perhaps the majority of the rest of the range.

No. 3, we also use an adaptive management principle here. So as technology changes and science changes, then we can adapt this plan to those changes on a pretty rapid pace way with the Board taking the lead on that.

And then, finally, the County's private landowners are already doing conservation measures now. And this plan really just reinforces those private conservation efforts on the ground. So there's a very strong correlation there.

So with that, unless, Margaret, anything else you wanted to add to that piece, I'd like to turn it over to Dr. Ramey.

DR. RAMEY: Sorry about that. When I was invited to participate in this process and discuss

some of the scientific issues, I asked how many days do we have to do this. So what you're seeing is an abbreviation, a sort of Cliff Notes, if you will.

As an initial matter, I think it's important to go back to the source documents of one of the key studies that resulted in the 2010 Greater Sage Grouse listing decision is warranted or precluded. And is one that fundamentally affects many different local areas because of its implications.

And that is a study by Garton, et al. This is a paper that was published in the Studies of Avian Biology in 2011, and earlier a draft was utilized to a disservice in its 2010 decision.

And this is a paper that utilized a lek count data spanning 42 years to estimate population trends in Sage Grouse and project them 30 to 100 years into the future, and then assigning risk of populations based upon that.

Now it's a central fundamental tenet of the scientific method that one should be able to reproduce the results of a study, that one should be able to go back to the data and obtain those data and move forward with an analysis to validate those results.

Another important part is that it is free of bias and it's free of error. In this particular case, this Garton, et al, study, utilized lek count data just for males, as if females don't matter, and it utilized data gathered by different individuals from different agencies frequently using different methods spanning 42 years.

It was gathered non-randomly. Initially there were very few leks counted, and now we're counting quite a few. So over time the amount of efforts increased, also the number of males counted per lek has decreased largely as an artifact of that.

This analysis utilized lek count data to estimate what population trends were going over time and fit models to them and then project those into the future. I'm not going too far into detail so I won't lose you.

It then applied a metric, the 5500 rule of thumb to these population predictions to ask, okay, so for example in the PPR population here, if it falls below 50, we have a high probability of it going extinct.

If a Meta (phonetic) population, a Sage Grouse management zone, for example, relevant here,

Colorado management zone applied to a management zone 7, if it falls below 500 individuals, that this whole region is likely to go extinct.

So it's fundamental at the basis of the listing decision, and it also trickles down to local management plans.

However, there's some problems with this, and they're fundamental. First of all, there are errors. So in this Garton, et al, paper, they utilized Sewell (phonetic) rights 1938 population genetic equation, the top one, to estimate the total population size based on the number of males in there.

And, as you can see, there's a four in the enumerator of the top equation for estimating effective population size based on the number of males and females. That four was left out of the Garton, et al, study. And this ended up in the final published version.

And it's not just myself that discovered this. There were six peer reviewers commissioned by the Colorado Division of Wildlife, many of whom discovered the same error independently.

The Council for the Endangered Species Act Liability, Judge Manson, former Assistant Secretary

of Interior's group, discovered the same issue. I'm publishing a paper about it.

This greatly overestimates the probability of extinction for any one of these populations in Sage Grouse management zones and the species as well.

Another fundamental problem is that I wasn't able to reproduce how he was going between the number of males counted at a lek. He said that there had to be 20 males counted at a lek, in a population, in order to end up with a total effective population size of 50 using that same equation.

You can't get there from here. Actually the correct number is 17 1/2. So once again, he's setting a higher bar and overestimating the extinction rates.

I can go into the issues and, like I said, I could have days on this. One of the peer reviewers, Rung (phonetic) in here for the USGS, had pointed out that there's these and other fundamental problems in there.

Conroy had found that if one takes the algorithms that were used in estimating these population trends and takes simulated random data

which has no trend, one ends up getting negative trends about 40 percent of the time. That's a bias.

Perhaps most fundamentally and most disturbing to me is the fact that those data that are used as the basis of that pivotal, influential, highly influential scientific paper are not publicly available. I personally wrote to Garton four times requesting those data and never received a response.

A colleague of mine recently wrote to Garton and was told that he couldn't have the data. He'd have to go separately to each state. And if any one state said that you couldn't have the data, you couldn't have the data.

This violates information quality guidelines including those of the Department of Interior. One has to be able to go back to the original data.

I believe that a number of federal decisions probably EISs have to rely on information, and that has to be reproducible, it has to be publicly available. And these are not.

Let me go on to another set of issues. So, as I mentioned earlier, this 4-mile buffer zone and 3 percent no surface occupancy restriction, for example, on Oil and Gas, these blanket prescriptions

are flawed because they don't address the fundamental threats.

The Fish and Wildlife Service identified in the 2010 decision basically six key threats affecting Sage Grouse. However, these blanket prescriptions don't tackle the specific underlying cause-and-effect mechanisms for each one of those threats.

In 2011, we published a paper titled "Oil and Gas Development and Greater Sage Grouse Review of Threats and Mitigation Measures." This paper was -- I personally handed it to Director Abby and Assistant Director Poule at the BLM on September 16th of 2011. That paper outlines, in Table 1, specific threats cause-and-effect mechanisms.

So one significant departure of the Garfield County plan is that it plans to address those specific cause-and-effect mechanisms and work with landowners to mitigate any of those, instead of relying on blanket NSO restrictions.

And let me just say from personal experience, I worked on California condors, Peregrine falcons early on, if we had kept with some of the blanket prescriptions that were recommended at the time for human disturbance, condors would be

extinct, Peregrines would still be listed.

Instead, what we did was to tackle the cause-and-effect mechanisms underlying each threat, and we were able to deal with the problems. Peregrines were delisted. Condors now are over 450. When I started, there were only 27.

Those blanket prescriptions are largely based on Corliff (phonetic) studies from Pinedale and Jonah Fields, some from the Poudre River Basin. Significantly different technology than is in use today.

They were basically putting vertical straws in the ground in about a ten-acre spacing in the Jonah Field, very industrial kind of place. Poudre River Basin, similar sort of issues.

Substantially different here too is that Garfield County, as we've seen, the topography, the vegetation, and the types of disturbances are substantially different from what those studies were based upon.

However, probably most importantly is that the number of these Corliff studies have not found a population level effect. So a minor amount of temporary avoidance by birds does not necessarily correlate with a population decline or loss.

These prescriptions were also based on some of the older technologies, as I just mentioned. I won't belabor that point too much. However, there really needs to be the acknowledgement of many of these newer methods and technologies that I had mentioned just earlier.

And that's going to be absolutely fundamental for conserving the species we're all discussing today.

Let me step back because we missed a point there. That Garton, et al study had a number of flaws and issues with it. It has population predictions that are in a constant rate of decline but yet populations actually fluctuate greatly.

Another central issue that we see constantly coming up in both the 2010 listing decision, the NTT document, and the Conservation Objectives Team report is that of connectivity. And, in fact, 18 kilometers is typically used as a dispersal distance for describing what's a Sage Grouse population.

However, more recent papers, and we'll provide copies of those to you, including Christi Bush in 2009 and Bush, et al, 2011, Tact 2011, Lyon 2003, have found the Sage Grouse dispersed over

larger distances and more frequently than thought.

Bush had found from genetic data males out to 300 kilometers, females out to 150. Tact, males out to 150 kilometers, females out to 120 kilometers based on GPS tracking data.

Now obviously long distance dispersals are not the norm, but these are significant because it takes very few individuals from a genetic perspective to move between populations to prevent the loss of genetic diversity and the extinction as a result of that.

The Conservation Objectives Team report which was just released has a threats analysis and has a ranking of the threats to those populations. However, there's no justification of how those rankings were arrived at.

It went from being a vote count of members in the draft report to having a simple ranking which appears to be subjective and is not quantitative. So we're going to seek an explanation from the COT regarding that.

An additional issue that I've seen here is that, and one that is fundamental to this plan, is how key private land conservation is. So 75 percent of listed species on the Endangered Species Act

occur on private land. About 50 percent are dependent upon private land almost exclusively.

Major scholars of Endangered Species Act and conservation, including the present Deputy Assistant Secretary of Interior, Michael Bean Pollock, who published in the Stanford University Journal of Law and Policy, Jonathan Adler, who published in The Boston Law Journal, have all pointed to the necessity, imperative necessity of private land conservation, particularly voluntary private land conservation and incentives to produce that.

So there is a number of studies that have shown that this is more effective than blanket prescriptions and a command control type of approach.

And then a final central issue I found and one that we've discussed here is this narrowing of policy options. And let me read you a quote briefly. This comes from Professor Roger Pelkey, Jr., at CU Boulder:

Addressing the significance of science for decision making requires an ability to clearly distinguish policy from politics. For science, a policy perspective implies increasing or elucidating

the range of alternatives available to decision makers and by clearly associating the existing state of scientific knowledge with a range of choices.

The goal is to enhance the freedom of choice. By contrast, the political perspective seeks to decrease the range of alternatives available to policy makers, i.e., to limit the scope of choice.

Garfield County plan seeks to increase those. And it's a fundamental difference that I've seen concerning conflicts with some of the regulatory documents that I've seen.

And I also have a number of documents to provide the agency members. Some of those are still being printed off.

DR. RAMEY: I think that Tom is going to raise that.

COMMISSIONER JANKOVSKY: I think we've shown what we found in the mapping. And then once we started digging further into NTT, and this is for the Service primarily, we started finding flaws in the science.

And it's not just some of the things such as Dr. Ramey has talked about as far as Garton's population persistence reports, but we've found

documents that are field documents that we can't even -- we don't even know what they mean. But these are cited in NTT.

And so we are -- I mean not only are we talking about questions we have with habitat, but I think we're starting to look at some of the science questions that are out there as far as the listing itself and is it -- or if there's going to be a potential listing.

So with that, we do have this document that was sent on to us, and we cannot follow that. Maybe I'll ask Dr. Ramey to --

DR. RAMEY: This was cited in the 2010 decision as Garton personal communication, and it was obtained quite by accident. And so I challenge anybody to decipher what it says.

However, this was cited in the document. And what this supposedly says is that population fluctuations in Sage Grouse are being eliminated because of threats, Oil and Gas in particular, and that's going to drive the populations into extinction.

However, the available data from Wyoming, for example, shows that these population fluctuations are actually very alive and active

going on over the years. And, in fact, they all tend to track each other.

A recently released dissertation out of the University of Montana proposes an explanation for this phenomena of population fluctuation as being driven by precipitation and summertime temperatures affecting survival. So we do have fluctuations.

So not only does this Garton, et al study from the past have a number of errors and biases and the data is not released, some of the recommendations that have come to the surface regrettably are in error themselves.

And here's a very interesting slide. So this is a comparison of the state average on the lower level of male attendance per lek. And Wyoming has some of the best data and the greater -- largest Sage Grouse density. So it's worthwhile to look at this.

And then comparing it to the Papa Joe area, which is the Pinedale, Anticline, and Jonah Field populations, both the core area average and then the effective populations in the Papa Joe area, Sage Grouse are still there. And, in fact, they're doing better than the state average presently.

And they're tracking approximately -- obviously lek count data has a lot of, let's see, there's error that come with it, but you see these overall trends persisting.

There was a 2010 paper and a recent update produced by a colleague, Renee Taylor. Those were provided to decision-makers at both the BLM and Fish and Wildlife Service in Washington, D.C. We're having copies printed off for you to see that the threat is overstated from Oil and Gas.

And particularly because the technology has changed, the mitigation has changed, and there were a lot of false perceptions that were set early on.

And I would like to note the Colorado Division of Wildlife's recently released comments on the Gunnison Sage Grouse, those are very important because they also stated a number of these threats were overstated on the Gunnison Sage Grouse.

Some of those same arguments can be applied here and refute some of the assertions made in the NTT and Conservation Objectives Team report. Thank you.

MR. JARMAN: Okay, thank you, Rob.

COMMISSIONER JANKOVSKY: I just would like

to go back to the 4-mile buffer. If we could touch on that just a little bit more, I would appreciate that.

DR. RAMEY: So once again this is based on correlative studies in the Pinedale and Jonah Fields. And it's based on what's the probability of some level of avoidance of birds from those areas.

So again, to reiterate, different technologies applied, different kinds of densities applied to those. For example, even in the Poudre River Basin, there was produced water as being sprayed out on the ground. I mean large differences with how things are done there versus how things are done here.

Fundamentally, though, this 4-mile buffer has persisted in the literature. And it doesn't deal with any of the specific issues that are cause and effect and local in nature and can be mitigated.

It is not directly applicable to the situation here. This is a naturally fragmented population, southern end of the range, and it is a different level of development and technology there.

COMMISSIONER JANKOVSKY: Thank you.

MR. JARMAN: And thanks, Commissioners. And we're just about done here. We saved a couple

of video clips to show and really illustrate I think the difference. I think it will be very helpful to have you understand why we've taken such a close look at this.

This first video clip, if I can get it to run here, is again from the helicopter flight we took when we went up on top of the plateau. And, let's see if this will play. I may have to do it this way. Let's do it this way.

But this gives us -- Dr. Ramey took this -- hopefully this will play. Here we go. So this is priority habitat as mapped by CPW.

DR. RAMEY: Notice the large aspen stands, forested areas. It's a very patchy habitat, as Eric and Zack pointed out.

MR. JARMAN: All right. So then to reinforce the comparison, this is a separate video shot of the Jonah Field in Wyoming.

DR. RAMEY: It resembles an industrial zone.

MR. JARMAN: Okay, so that's it. I'd like to thank the Commission and all the agency staff and everybody for sitting through that.

COMMISSIONER JANKOVSKY: I would really like to thank Fred and our team for putting this

together.

As you can see, we have concerns. We've talked about that from the get-go. Primarily started out with topography mapping, geography and the differences that are coming out of the NTT report.

And then going further into that, we started getting into some of the questions on science. And I know you guys here are going to have a lot of questions for us, and we want to hear those.

But, you know, bottom line when we end up, we just really want to know why our -- not why, we want to have our report as one of the alternatives in the EIS. That's really where we're headed. And we feel that coordination process and FLPMA has laws there that it should be included.

CHAIRMAN MARTIN: I didn't want to sit in front of the projecting screen there so that you could all be concentrating on it instead of watching my head bobbing back and forth.

So what we're going to do is take a small break, and then we're going to come back and follow again the agenda and do some discussion and interaction and see what we can come up with.

(Recess was taken.)

(Back on the record.)

CHAIRMAN MARTIN: I hope the TV didn't set in. I hope everybody was okay.

Once Mr. Samson enters the room, we'll all stand and salute. Yeah, it could be like break out in spontaneous applause for Mr. Samson, yes, unrehearsed. Perry was hogging the conversation.

You have permission to rise. All rise. Mr. Samson has arrived.

(Applause.)

CHAIRMAN MARTIN: Our next item is the discussion on habitat mapping by CPW for Garfield County. Did we do all that, Fred? Don't we want to do a little discussion on that particular issue?

MR. JARMAN: Thank you, Chairman. So we've gone through -- and thank you for sitting through that presentation. There's a lot of information there obviously.

But we wanted to dedicate the rest of today really to have a discussion on the mapping and everything that we presented, knowing that you've had it in advance and seen where we are. We would love to hear your thoughts and have a discussion here.

And, of course, our team is here and available to talk about the mapping. I mean obviously that's very important to us and the basis for our plan.

So I'd turn it back to the Chairman at this point, but to start it open for discussion.

CHAIRMAN MARTIN: Right. And this is a coordinating effort. So the coordinating partners are the ones that are probably going to speak.

I probably won't take any comment from the public, simply because this is a meeting between government to government. Trying to have a discussion, an open discussion, honest discussion on the mapping and where we're headed as Garfield County.

Jim, you're looking at your pen, man. Do you want to start it out? Do you want to break the ice, buddy? Come on.

MR. CAGNEY: No, I thought we were going --

CHAIRMAN MARTIN: We will, we will.

MR. CAGNEY: I was planning to make a couple points in the NEPA segment.

CHAIRMAN MARTIN: Okay, very good. That's cool. All righty. CPW.

MR. PETCH: Several things that we would like to discuss with you. And I don't know how you want to frame this, Fred.

MR. JARMAN: Go for it.

MR. PETCH: Let me start with the priority habitat map. Priority habitat and general habitat designations are definitions that we have not traditionally mapped to in Colorado. And I don't know that other states have mapped to them as well.

Those definitions arise from the BLM NTT report and from surrounding BLM instructional memoranda that describe those as the map layers that BLM would use in their EIS.

So the priority habitat map that has been somewhat discussed tonight or today and has been prevalent in the BLM Sage Grouse EIS discussions was produced for BLM's use in that effort.

It was done on a statewide basis. It was done using whatever information we had from all six of our populations in Colorado, but brought to a statewide framework.

That said, some of what occurs in Moffat County with Sage Grouse, what occurs in North Park, influenced how that map looks in Piceance. Some of what happens in Piceance influences how that map

looks in Moffat County and Routt County and in Eagle County, for instance. So it is a statewide map.

The other thing that -- well, I guess I'll leave the priority habitat map there for now unless there are questions. And maybe there will be as we get into this a little further.

MS. BYFIELD: Can I interrupt you?

MR. PETCH: Yes, ma'am.

MS. BYFIELD: That brings up I think a really good question. So if I understand this right, it's your data, Colorado Parks and Wildlife's data, but you did it based on parameters given to you by the BLM. Am I stating that correctly or understanding that correctly?

MR. PETCH: No, the definition is established that it should include those seasonal habitats that are used by Sage Grouse, breeding season, the brooding season in the summertime and winter.

Additionally, although this wasn't in the original definition, it's in the instructional memoranda, but also connective areas between those areas of habitat as well. So you see linkage areas identified between populations in the Colorado map.

You also see areas of less suitable and

sometimes unsuitable habitat within populations that we have evidence or strong suggestion that birds move across in accordance with their seasonal or sometimes even daily behavioral patterns.

So, anyway, produced a definition to include those habitat types. We generally have mapped by seasonal habitats in our other mapping with the exception of our overall range boundary which is our best guess of where the majority of Sage Grouse are located in Colorado.

There are flyers outside that, but that's the area that we believe is Sage Grouse habitat that could and should be managed for the continued persistence of Sage Grouse.

The occupied range map adjusts periodically. We remap our wildlife habitat layers on about a 4-year cycle. We just redid the occupied habitat map prior to going into this priority habitat mapping, so we were working from the most current sense of where Sage Grouse occurred going into that process.

In the general habitat is those things that aren't, you know, the most important, the most crucial for maintaining populations but are other areas that are occupied by Sage Grouse. And for

Colorado we used our occupied range map as that outside perimeter.

There was a slide earlier. And maybe actually this might be a good time to deal with it, Fred, the slide that shows the difference between the Mindy Rice model map and priority habitat.

MR. JARMAN: You'll have it for 42 seconds.

MR. PETCH: And then you are done. I'm not sure I'm that fast.

MR. JARMAN: I apologize, we'll be able to reboot this soon.

MR. PETCH: No problem.

MR. JARMAN: I'm sorry.

MR. PETCH: Not a problem, Fred.

MR. JARMAN: It kind of gives you a sense -- well, actually this is the 2008 mapping. Oh, I know what the map you're talking about is. I'm sorry. Yeah, the Mindy Rice stuff, yeah. Okay, here we go.

Okay, Brad, talk about it.

MR. PETCH: All right. My sense of the discussion when this was presented earlier is the fact that it shows red on the right and green on the left is a discrepancy in our model process in

developing habitat.

The discussion earlier was we used three layers in developing that priority habitat map, or three processes, if you will. We used the seasonal habitat maps that were developed and are reported in Mindy Rice's paper that's now been accepted for publication in the Journal of Wildlife Management.

Those seasonal habitat maps then were aggregated across those three seasons. So the area that was a high probability of use for breeding and an area that was high probability in winter and in the summer period, all those high probability areas were aggregated because the priority habitat definition is the aggregate of those seasonal habitat types.

As you noted in that screen shot of one of Mindy's maps, those are extensive areas, more extensive than we were comfortable saying those were areas that met the definition of priority habitat which is essentially that it's key to the long-term persistence of those Sage Grouse populations.

And so we used the other two layers that you referenced. One of them is production areas which we have defined as a 4-mile radius around lek sites as an index of distribution of Sage Grouse,

not as an impact assessment, but an index of distribution.

We used that to clip what we called priority habitat back. So we reduced priority habitat based on 4-mile radius, so areas that are demonstrated throughout Colorado and throughout much of the West to contain about 80 percent of nesting Sage Grouse nests centered around a lek of capture.

MS. GRIFFIN: So I think you need to point out the difference between their 4-mile buffer and ours.

MR. PETCH: Right. The other clip is the occupied range clip that we also clipped back anything in Sage Grouse habitat that fell -- or anything in Mindy's models that did not fall within our occupied range map, we clipped out.

May show based on vegetative assessments or based on comparison to areas that were used by telemetry birds as being suitable for Sage Grouse, we removed those areas if they were outside our map of occupied range as not being an area that we were intending to manage for Sage Grouse or believed had a viable opportunity to be managed for Sage Grouse.

So you see those restrictions in areas that show red on Mindy's models down to what we show

as priority habitat. And the specific thing that was shown in that slide earlier was a reduction of an area that shows in Mindy's models as being pretty suitable based on comparison to other locations of telemetry birds in the underlying vegetation character.

Because it was such a long distance from any known concentration of birds and we used lek locations as that index of concentration, we clipped those out and said that that's not a place we're going to call priority habitat.

Is it occupied? Yes. We have evidence that there are birds there. Is it suitable? In our belief it is. Certainly there's a discrepancy between your map of suitable and ours that we want to talk about yet this morning.

So, anyway, that's where you see some of those differences between the seasonal habitat models in the Rice paper and what shows up as priority habitat.

The question of 4-mile radii came up a minute ago. And there are several uses for 4-mile radius circles in the Sage Grouse world right now.

The underlying one, and the one we use in Colorado, at least Colorado Parks and Wildlife, is a

4-mile radius -- we've use the term production area for it in other contexts -- as an index of where nesting Sage Grouse are distributed.

That throughout a variety of studies totaling hundreds of nests, there's a very dependable distribution curve of how Sage Grouse nests are oriented around leks where those birds were originally captured.

And at 4 miles in Wyoming, in Colorado studies, in other studies around the intermountain West, a high prevalence of studies show that at 4 miles you're at about -- 80 percent of the nesting sites are within that 4-mile circle.

So as an index of distribution, we think it has good scientific validity and it is pretty well proven in literature in Colorado and elsewhere.

That concentration of birds then is used in a number of other context. In the NTT report it's used as an NSO area, for instance. That's moving beyond the data that suggests how the birds are distributed to an assumption that if you protected that, then you're going to protect 80 percent of the birds by extension.

That's a very different use of the 4-mile radius than the one we used in building the priority

habitat map, which is using it only as an index of distribution, of where birds are most likely to be located.

CHAIRMAN MARTIN: Let me get that straight now. It's not that you're recommending no surface occupation in that 4-mile which is actually an eight-mile range as a circle. You're only using it as potential of the habitat and the nesting areas, et cetera, but yet there can be human activity within there.

Because looking at the map at 221,000 acres, 70 plus percent is privately owned land that's already under either agricultural or other developments. And taking the goal of 3 percent human disturbance within the priority habitat is physically impossible to reach within this area.

Are you agreeing with me on that?

MR. PETCH: Yes and no. In the context of yes, from a Division of Wildlife standpoint -- sorry, that happens to me every day almost. From a Parks and Wildlife standpoint, we are very comfortable with the assessment that birds are distributed across that distribution curve.

And in our comments on activities, activity level planning at BLM and elsewhere, we

routinely refer to that as evidence that birds are likely to be there. And so management practices that are suitable for maintaining Sage Grouse ought to be applied there.

The specifics of the NTT report and how that applies in an alternative for the future draft environmental impact statement, we're still evaluating, as are the other cooperators. And that's my yes and no part is we haven't come to grips with that yet.

CHAIRMAN MARTIN: Okay, let's go back to the yes part of that particular issue. In reference to the private land, you also offer incentives and not a mandatory requirement under Division of Wildlife. But you incentivize the approach for conservation issues.

MR. PETCH: We do. And that falls short of -- I mean the word "incentive" often carries with it the connotation of some monetary benefit.

CHAIRMAN MARTIN: Not necessarily.

MR. PETCH: We aren't participating in that very often. But certainly from all of our management plans, the PPR management plan that was referenced earlier, our state management plan, are all voluntary conservation plans.

And, you know, the 2010 decision was referenced earlier. That's one of the places the Service has raised an issue, that they are concerned about the validity of those conservation plans in demonstrating conservation efforts on the ground.

CHAIRMAN MARTIN: And that's the paradigm shift in reference to the new approach versus what has been practiced for so many years?

MR. PETCH: Absolutely.

CHAIRMAN MARTIN: Okay.

COMMISSIONER JANKOVSKY: Concerning the 4-mile buffer, I mean we don't have a problem with that as long as there's Sage Grouse habitat. But when there is valley floors, there's black timber, there is PJ, there's aspen, they're not in that habitat. They may fly over it.

I mean definitely these birds are going from one -- they have to be going from one area of habitat to another. And that's where we have a real problem with that. And that's what Dr. Ramey was getting at.

I mean, you know, you start talking about conductivity, but because a bird flies over aspen or flies over conifer doesn't mean that it's priority habitat. And that's really what we're getting at

with our mapping.

MR. PETCH: And let me address that specifically, if I may. The slide you had up a minute ago, Fred, that showed the priority habitat map right at the top of your pick list.

The red areas in the lower left-hand corner are mapped as priority habitat based on the vegetative characteristics and similarity to places we know we have telemetry bird locations.

They are clipped to the shape they're in because of their proximity to a strutting ground being four miles away. That strutting ground is up on, for some of them Skinner Ridge, for some of them up on the ridge between Brush Creek and Clear Creek.

But you'll notice we don't include the valley floors in those 4-mile radii. So the perimeter that brought those areas down onto the very southwestern portion of the map up there got there by a 4-mile radius, but they are not continuous 4-mile radii.

Now there are a couple of examples of that. Topography is the easiest one to deal with and the most obvious in the Piceance, that a 600-foot vertical drop is not Sage Grouse habitat.

And, frankly, even if it is likely to be

Sage Grouse habitat at the bottom or would be in some other place, they don't use those in the Piceance, those riparian meadows at the bottom of say Roan Creek or Clear Creek or some of those on the south side of the divide here.

COMMISSIONER JANKOVSKY: When you get into that red area there, you will see these types of -- this topography. I mean what you carved out there was like Parachute Creek and Roan Creek which are huge -- I mean 2,000-foot vertical drops.

MR. PETCH: Right.

COMMISSIONER JANKOVSKY: But there are ridges and 600, 800-foot drops throughout this entire red area. And that is why we went back with the mapping we did to come up with --

MR. PETCH: There are. And that really brings us to the criteria that were used in the vegetative map. The mapping process that you all used in your plan is not terribly distinct in concept from other mapping processes we have used in the past.

The difference, and where there's a significant break in technique, is between say the Heather Sauls' map that was referenced earlier and that I want to come back and talk about this morning

and the resource selection functions that Brett Walker is working on and the priority habitat map, where those are built as much based on telemetry points as they are on habitat associations.

The model in the Garfield County plan is a very traditional approach using newer data, newer vegetation classification but a similar approach of making assumptions about where birds are going to use, what habitats are going to be suitable, and looking for those places in the landscape.

And in that sense, those assumptions are critical. That dictates where the model maps as suitable and where it does not.

And those are the hardest things to come to grips with. And in many cases, there is not a right and wrong answer there.

Some of the photos that have been flashed up on the screen here in a little bit, or in the last few minutes, some of those are, we think, probably barriers to Grouse use.

They're not using those valley bottoms. Even in things that are 100 feet maybe in elevation difference. But in many of them, they are.

And some of that is based on vegetative character, some of that is based on subsurface soil

and the ability of moisture to get to the surface and produce wet meadows.

And that's where some of the interest has come from in really letting the telemetry birds begin to tell us where they're choosing to go, not using our assessments of what's suitable, which is always based on, you know, some reference to scientific data collection but also an awful lot of assumption and assessment of what is suitable. And we're not always right on that.

DR. RAMEY: Brad, if I could just interrupt just a second.

MR. PETCH: Please.

DR. RAMEY: This notion that a couple of hundred foot difference in topography is a barrier to Grouse, I mean that flies in the face of your own data.

Because the lek data we have been able to obtain shows some birds that are out on little fingers of habitat that are separated by gaps of a thousand feet and a half a mile or more.

So the birds obviously go across those, and then also the genetic and GPS tracking studies that I cited, so again Bush 2009, Bush, et al 2011, Tact, et al 2011, and the old collaring study by

Lyon showed that birds do disperse over long distances and over and around what is considered to be unsuitable habitat, including agriculture, oil and gas, rivers, roads, et cetera.

MR. PETCH: That's absolutely correct. And, frankly, that's part of the reason our priority map looks the way it does is our assumption that they're not going to use that canyon bottom is an assumption, until we can verify that based on actual bird behavior or bird locations or something like that.

And so as you get into the more -- the less definitive kinds of breaks, not a Clear Creek drainage, although they fly over that routinely, not a Parachute Creek drainage, although again they fly over that pretty routinely, but the kind of swale that's shown in the upper photograph here, how do birds use that habitat?

Our assumption in 2006, 2007, 2008, the time that the Heather Sauls' model was built, the time the PPR plan was completed, and based to some extent on a very small telemetry data set from a Master's project that occurred in the Piceance, was that birds were using these ridge-top habitats, essentially what is showing white in that photo on

top or the most pale color, you know, the most open, snowiest area, and that they were doing most of that movement by foot.

Well, birds don't have wings unless they intend to use them, in general sense.

But much of the telemetry data from early on, again very small sample size, very short duration, only collected in the summertime, or by and large collected in the summertime, was indicating a very concentrated use of those ridge-top areas.

And with slope parameters very similar to the ones that are included in the Garfield model, with vegetation parameters, an almost absolute reliance on where sagebrush is distributed as an index of where Sage Grouse are going to be.

That's why the Heather Sauls' model looks so similar to some of the models that have been shown out of the Garfield model as well, because the underlying assumptions that went into those were very similar.

I want to come back to the assumptions in a minute.

DR. RAMEY: But hold on a second, if I could. So explain then how the Sage Grouse got out

to Lek No. 247020021 separated by these large gaps that are basically islands.

MR. PETCH: They flew is my guess.

CHAIRMAN MARTIN: They can.

MR. PETCH: Absolutely. Now in 2006, '07, '08, we didn't believe there was as much overland travel as there clearly is.

And in GPS, birds have shown that more clearly than any VHF birds ever have is that even on a daily basis, we're seeing significant movements across large areas of -- well, sometimes large areas of suitable habitat, but often large areas of unsuitable habitat as well.

They do move to a greater extent than we believed certainly five, six years ago.

But as you build those into the assumptions of very small patches of habitat, then we were headed very much in the same direction in this hypothetical model that is contained in the appendices in the PPR plan.

But I would also like to draw your attention to the maps of occupied range that are included in the body of the PPR plan. That focusing on the appendix is not always necessarily the best approach or the best description of what was

intended in that plan.

The map that's included in the body of the plan, and I'll reference the occupied range map on page 50 of the PPR plan, looks very much -- actually it's larger than the priority habitat map that we're currently working with in the PPR.

Is that accurate at a 2-meter scale? No. Is it accurate on a where are birds generally distributed in the Piceance Basin? Much more so.

And so that's one of the things you run into with maps is the purpose the map is derived for makes a huge difference in what it's going to look like.

MR. JARMAN: Hey, Brad, let me interrupt you for a second. I couldn't agree with you more on that last statement.

The question that we're trying to get to, though, is reproducibility. And sort of a core issue.

And so I hear a lot of what you're saying using words like assumption and professional opinion and in the field and all those things that are all well and good, but they're not cited literature either.

And when it comes to reproducibility,

wouldn't you agree that that's absolutely critical in creating a map that's going to be used for federal policy?

MR. PETCH: Yes, in the context, the repeatability is generally discussed in scientific circles. That's different than the context we're discussing it in today.

MR. JARMAN: Say that again. It's different than what?

MR. PETCH: That's different than the context we're talking about today. The repeatability in the context of scientific --

MR. JARMAN: Reproducibility.

MR. PETCH: I'm sorry, reproducibility is generally -- this is not in a policy standpoint, this is in a scientific paper standpoint -- is nobody even starts to look at trying to reproduce or replicate a study until it has been peer reviewed and published in a journal.

And that's really where we are now. We have evidence that is showing us things.

We have a management time frame that is requiring us to do things on an accelerated schedule, and we have data that's not complete yet in a scientific scale of peer reviewed, completed

project, and published in a peer-reviewed literature.

So some of this goes around to the issue of the CORA request and why Parks and Wildlife denied Garfield County's request for the telemetry data. And I assume you guys would like to address that. I would.

MR. JARMAN: No, I appreciate that. What I'm hearing from you is that you cannot -- you would agree that you can't reproduce the map that you've produced.

MR. PETCH: We certainly can reproduce the map that we've produced.

MR. JARMAN: So is that information --

DR. RAMEY: But can we reproduce your map?

MR. PETCH: Can somebody else reproduce that based on the data that we are releasing at this point? Because it is based on telemetry data that, in the Piceance anyway, is still part of an ongoing research project, no.

MR. JARMAN: All right, stop there for a second. So now you've got enter into the picture the BLM who's using your map now getting ready to release a draft EIS based on that map. And under federal law you've got to be able to disclose the

data that supports that map.

So how can you sit here on the verge of the draft release saying none of that data is available?

MR. PETCH: The primary issue -- let me address the CORA issue, and then we can come back to that. The primary issue with our release of interim data is that we have a large fiduciary responsibility in that data to make sure that we get the best science out of it that we can.

And in the Piceance, for instance, we have several hundred thousand dollars invested in that study, most of it provided by industry partners who also have an interest in us driving that project to completion, being able to publish it.

The issue with prior release of data is that it gets out, gets analyzed by someone else, gets published by someone else. And our investment in that research data is no longer usable by us because we can't get it published. We've been Paul Revere'd once that data is out there.

So that's the reason that clause is in the CORA statute for universities, for researchers in state agencies, is to maintain the integrity of ongoing scientific research until it reaches the

point where normal scientific processes would carry on.

So in that sense, that's why we have not released that data and why that clause is present in the CORA statute that protects that data until it has been peer reviewed and published.

DR. RAMEY: However, you've already published.

MR. PETCH: Beg your pardon?

DR. RAMEY: You've already published.

MR. PETCH: We've published the seasonal habitat maps including a portion of that data set, data up through -- we cut it off in 2010, Kathy?

MS. GRIFFIN: Uh-huh.

MR. PETCH: It also includes thousands of data points from other counties in Colorado, from Moffat County, data that was collected in Eagle County, and in Southern Routt County, and then Piceance data points as well.

We have released to you those data points that are no longer part of an ongoing research project consistent with the CORA request. But we have not, and at this point do not intend to, release those ongoing research projects that are specifically protected by the CORA statute.

CHAIRMAN MARTIN: Therefore, that's our conflict with the NTT report and also the mapping process, et cetera.

MR. PETCH: I understand your conflict there.

MS. BYFIELD: Let me interrupt you. Because the problem here is that you put the BLM in a pretty big box because they're under a different requirement with NEPA, CEQ regulations, and the Information Quality Act.

They're under a completely different requirement which means they can't release anything, disseminate anything to the public unless they can produce the data behind it.

So you produced a map that they are trying to rely on, that they cannot rely on. So when they come out with their draft, they're in a real box.

CHAIRMAN MARTIN: Not a desirable situation.

DR. RAMEY: Could I just address the scientific issue here? You just heard from me about this one study that had numerous issues, and it was peer reviewed and published and relied upon.

So peer review is not necessarily the gold standard. It is, at best, an imperfect filter on

information.

But let me read to you the Office of Management and Budget Guidelines on information quality. Prior peer review and publication is not by itself sufficient grounds for determining that no further peer review is necessary and that the adequacy of peer review for highly influential scientific documents, so this cuts to the agency, is a rebuttable presumption.

MR. PETCH: Right. The difference, I believe, in this case -- and my guess is we'll get to the end of this conversation and have to agree to disagree on this -- but my assumption on the specific issue of BLM is that the priority map is not a BLM product.

The priority map was produced by the State of Colorado and the State of Wyoming, the State of Utah, the State of Idaho, as a description of what priority habitat is or what general habitat is in the State of Colorado.

MS. BYFIELD: Okay, but BLM is relying on it.

MR. CAGNEY: Can I inject a point?

CHAIRMAN MARTIN: Go ahead, Jim.

MR. CAGNEY: Talking about the box I'm in,

the BLM has relied on State Game Agency maps since the beginning of the existence of the Bureau of Land Management.

It's a process that I think has served the public pretty doggone well, which is not to suggest that I've always agreed with everything on that map. You know, what we've done, and be it Wyoming and Colorado, the two states that I'm familiar with, is use those maps.

If we were to choose to not use State Game and Fish Agency maps, then we would be required to essentially make our own and defend our own.

And I'm just horrified by that prospect because the Bureau of Land Management simply does not have the resources or the capability or any kind of ability whatsoever to duplicate that effort.

I'm kind of a little bit horrified by some of this proceeding here in that we're just going to usher in a new era where any project proponent will do a study and make their own map.

And if the BLM is in a situation where we have to accept that as the new norm and take the responsibility to come up with the scientific basis to refute that on a project-specific basis, we're out of business. I mean, that's a leap into the

void that I just can't see the Bureau of Land Management surviving.

MS. BYFIELD: Mr. Cagney?

CHAIRMAN MARTIN: Hold on. Jim, finish your conversation.

MR. CAGNEY: So, you know, there's really nothing about the entire idea of Sage Grouse being listed that I think is a good thing. I mean, nobody likes this. But I don't see myself in a box because of the Colorado Parks and Wildlife.

CHAIRMAN MARTIN: Okay. Well, we'll defend you. It's great to have those maps and what have you in reference to relying upon your policy overall, management plans, et cetera. But if those are faulty, and you're making that policy statement based upon errors, then your policy is in error.

What we're trying to do is to make sure that the CPW -- I hate to say that, I like Division of Wildlife -- maps, but we feel that there are a lot of errors in there, and that's what we're trying to say.

And we do not -- and we're trying to actually defend you, in that you're getting some faulty information you're making an entire policy statement on which is a leap beyond past practices.

I mean you look at your policy that you're saying 3 percent of human disturbance in the prime habitat is physically impossibly when 70 percent is private land and has already been developed.

So we say, wait a minute, there has to be a different way, Jim. So we're working with these guys to find out what is real on the ground and why six plans within the state are better than one national policy.

And so that's what our goal is. We're trying to also preserve the bird and do the right thing for each agency. That's why we wish to be coordinators and to have this exchange, instead of just having one federal policy for 11 states and two Canadian provinces. So that's what we're after.

So, Margaret, do you have any comments?

MS. BYFIELD: Yeah, and just as a point of clarification, I just want to clarify that Garfield County is not creating this situation.

That the Information Quality Act which is a congressional act is what is requiring that the data be looked at closer. And I believe that came out in 2000, so it's been more recent that it's been utilized, but it was prepared because it was recognized that the quality of the science needed to

be verified, needed to be double-checked.

So the burden -- I mean I understand your concerns, how is the BLM going to do this. But the burden was not placed on you by Garfield County. It was placed on you by Congress.

DR. RAMEY: And let me just add, this transparency and openness is consistent with President Obama's Freedom of Information Act directive, and as well as John Holder, science adviser to President Obama's Scientific Integrity Guidelines that were released, that when in doubt release the information, and to make sure that it utilizes best available scientific information through this process we've been discussing.

CHAIRMAN MARTIN: Okay, we're going to have a timeline. I know that this can go on forever, Brad. But we're going to try and close this particular discussion out in about nine minutes. Can we do it?

MR. PETCH: I believe so.

CHAIRMAN MARTIN: All right, thank you.

MR. PETCH: There really is only one remaining issue I wanted to raise from a mapping standpoint. And that is to address the Heather Sauls' model.

It's interesting to me that it looks so much like the Garfield models. But it's not a surprise to me that it looks so much like the Garfield models because it's based on very similar thought processes behind it.

There's a statement in the plan, and it's been referenced a couple of times today, about Piceance is different than other places. And I could not agree more, it is different than other places.

The challenge that comes into the modeling process, and it's something we faced in Heather's issue, is that the data that's used to build those conceptual models came from somewhere else. And that's as true in the Garfield model, albeit some use of preliminary reports from some of our own researchers in the Piceance Basin.

But the national guidelines, those things that suggest that birds avoid tall shrubs, that birds avoid trees, that birds only use wet meadows a certain distance from sagebrush, are largely derived in the Great Basin, in Idaho, in the Wyoming Basin.

They are not necessarily applicable to the Piceance Basin. And I don't mean to throw stones by saying that because we use the same kinds of

assessment in the Sauls' model that we contracted for as an example of how we might proceed in the future in the PPR plan.

That said, we know now since 2006 that those characters are not -- they don't adequately represent the distribution of the birds. And again this is stuff from telemetry points that is ongoing research development.

But there are two things that, and forgive me if I'm wrong, correct me if I'm wrong, but the two things that really the Garfield model and the Sauls' model show in great clarity are those areas that are flat and those areas that are dominated by sagebrush canopy cover.

Are those good Sage Grouse habitat? Absolutely. And if you were going to go out on the landscape and look for Sage Grouse, would you start there? Absolutely.

Are those the only places in the Piceance that are used by Sage Grouse? Absolutely not.

What we have seen in the last six years in the Piceance Basin is a much higher use of mountain shrub communities than is represented in the literature, especially the range-wide literature. A much higher use, especially at the ecotone scale.

And as you're looking at a -- and this is where sometimes higher resolution vegetation becomes much more challenging because at a Grouse's standpoint, those may be real differences if you're looking at a vegetation map at a very fine scale. To Grouse, those may not be represented.

And in a broader scale thing like the basin-wide land cover, the CVCP land cover may not even be represented as a difference. And they may not represent a difference to Sage Grouse.

So we see a higher use of mountain shrub. We see a higher use of slopes. We see a little bit more tolerance of other vegetation types, oak brush for instance, serviceberry for sure, aspen to some extent, snowberry communities.

So we see the two things that the Garfield map really represents very well, flat and sagebrush dominated, are much less significant for Sage Grouse in the Piceance than they are in Moffat County, in the Wyoming Basin, and in southern Idaho.

So your contention that the Piceance is different is, I think, correct. But the model still represents a large component of data from somewhere else that is giving you an artificially small and an artificially ridge-top restricted look at what is

Sage Grouse habitat in the Piceance Basin.

CHAIRMAN MARTIN: Which brings up two questions. Number one, the birds are adaptable to just about any environment throughout. And the other one is the encumbrances or the hazards to these birds are mislabeled or, shall we say, identified incorrectly.

Because what are the hazards to these birds within this particular area if they can travel great distances, they use tops, they use everything else under the sun that we have in Garfield County, what is the real danger of the extinction of these birds if that is so true?

MR. PETCH: They don't use everything. And I think that's an oversimplification of --

CHAIRMAN MARTIN: Well, the things that you just described from timber to serviceberries to all of the other things, and that they have been able to adapt and travel great distances, what is the real hazard of extinction if they have been able to adapt to different environments?

MR. PETCH: They don't use it to the extent they use sagebrush. And I want to be clear about that.

They use it more frequently than they use

it in -- let's say, in the bottom picture up there, if you had data from that place, the likelihood that they use an area under serviceberry is zero because there isn't any serviceberry.

In the Piceance, that's a different scenario. And we see it in the Piceance, we see it with Gunnison Sage Grouse on Pinon Mesa, we see it with Gunnison Sage Grouse in the Dove Creek area. They use the edges at least of habitats because they are available to them there.

Does that mean that they can live in the middle of an oak brush stand or a serviceberry stand? Absolutely not. They're still a sagebrush-dominated species.

So they do have limitations. And one of the limitations, other than all the potentially anthropogenic stuff going on out there, is that habitat changes over time.

And those other vegetation types are more prevalent than they were in the 1930s, '50s, '60s, and Sage Grouse have suffered as a result. They are concentrated more onto those sagebrush areas and those bordering environmental types.

But at a scale where you neck that down to a very small, very refined scale, I think the

opportunity to miss things that are used by Sage Grouse, perhaps not a preference, but used by Sage Grouse in the Piceance is very, very high.

And it gives you, both in the Sauls effort in the PPR plan and I think for similar reasons in the Garfield model, a pretty substantial under-representation of where Grouse can be found today in the Piceance Basin.

CHAIRMAN MARTIN: Yeah, and we're still talking two different things. What is the hazard to them from extinction then? Because they have been able to adapt. They're different than Gunnison.

Gunnison Sage Grouse have adapted to their environment. The Jackson County, they've adapted to a different environment. Moffat County, they're a totally different environment. They've adapted to that or they're very at home at it.

They seem to be distributed throughout this particular area based on yours. What is their hazard of extinction?

MR. PETCH: In the Piceance it's actually, I believe, quite high. The Piceance Basin of all populations in Colorado -- and we have less perfect lek data in the Piceance than anywhere.

For the same reasons that you guys didn't

do this trip around the Piceance in a vehicle, that's the same reason we don't have very good lek counts in the Piceance. It's difficult country to get into.

But we have seen significant contractions in population, in range in the Piceance, especially at the northern end of the range, much of that in Rio Blanco County. We have seen a significant contraction of the sagebrush vegetation types that are represented in your model in the last 30 years as well.

MR. CAGNEY: And some of those contractions occurred before the Oil and Gas.

MR. PETCH: Absolutely.

CHAIRMAN MARTIN: Well, yeah, but 70 percent of it is agricultural purposes and the irrigation practices that kill sagebrush and that has been again for existence of human use of the land. That's private land and it also happens to be 70 plus percent of this habitat.

And going back to the goal, based upon your mapping and your science, et cetera, 3 percent of human disturbance within the prime habitat is the desired effect. It's impossible when 70 percent of it is already private land and developed.

MR. PETCH: But I'm not arguing for or against the 3 percent limitation in the NTT report, or for or against use of the 4-mile radius as an NSO. Not arguing for or against that.

But as a description of whatever management prescriptions we want to apply to the landscape, of where those should be applied to maintain Sage Grouse, I don't think the model that you've currently proposed is sufficient.

MR. JARMAN: Chairman, I have four points, if I could.

COMMISSIONER JANKOVSKY: Okay, then I have some things.

CHAIRMAN MARTIN: We're running over.

COMMISSIONER JANKOVSKY: I want to state that, you know, you talk about the Sauls report and her mapping, but we also used Apa and Walker when we did ours, and we looked at 2010 papers when we did that. And those are all your guys, all three of them are your guys.

MR. PETCH: Yes, they are.

COMMISSIONER JANKOVSKY: And the next thing is, you know, this is fringe habitat. We are on the southern edge, probably been fringe habitat for as long as that population has been there. I

mean it's not good Sage Grouse habitat.

MR. PETCH: Certainly not like the bottom photo.

COMMISSIONER JANKOVSKY: And these birds have, as Commissioner Martin said, these birds have adapted. And they're getting from one pocket to another pocket primarily by flying. And you say they may be walking to some of those pockets.

But right now this is the best available science. It's not just the Sauls report that we're using. We're using three of your guys to come up with this mapping.

MR. PETCH: Right. And I do need to respond to that a little bit, Commissioner Jankovsky, that Dr. Ramey is correct that a peer-reviewed system is not a perfect filter. But a peer-reviewed system is a better filter than incomplete progress reports.

And while I appreciate the use of the data that is Piceance specific, that's valuable, and certainly it does you all credit to look for that most current data, each of those documents is a preliminary interim progress report.

None of those documents have been finalized. You know, none of that has been peer

reviewed, none of it's been completed. In many cases the kinds of analysis that would give you the answers you want for your model are not done either.

So, yes, I acknowledge that those are, one, our people and, two, working in the Piceance. But those are not completed works, any of the three of them.

COMMISSIONER JANKOVSKY: But Walker is the most reputable scientist right now in the Piceance. And his work is at least verbally cited continually.

MR. PETCH: Certainly.

COMMISSIONER JANKOVSKY: When we go and listen to information from Parks and Wildlife, we're usually listening to Walker.

MR. PETCH: Certainly. But the map that you've put on the table does not line up with the state of Walker's current work.

CHAIRMAN MARTIN: All right, thank you. Fred, four points, and then we need to move on.

MR. JARMAN: Okay. I'm going to defer one to Dr. Ramey, but I'd like to start here very quickly.

Along those lines just to reiterate, as you can see, and what should be I think incredibly alarming to the Fish and Wildlife Service, is the

fact that there isn't data that is available that supports what you're saying.

And so that's a fundamental breakdown on a number of federal levels. But here we're trying to craft policy, as you are, as Jim is with the BLM, craft policy, federal policy, broad-reaching policy, based on unfounded science.

So this should be incredibly alarming for anybody listening to this discussion. And I think frankly it's a left-hand turn for the EIS.

But if there is data that you are willing to let anybody else see in terms of transparency, we really would like to see that data if you are relying on it rather than opinion.

Because opinion only gets you so far, unfortunately, when it comes to a listing action because it has to be done on credible, literature-based, peer-reviewed science and not some person's field impression from one day to the next on where Sage Grouse may or may not be. So that's how important all of this is.

I have a question for Jim Cagney on this very issue of the map. We've spent, and I'll try to be very careful here, and you tell me where I go off the rails, but in the cooperating agency meetings we

are a cooperating agency, we have that status as many others do in this room. We spent probably the better part of the last year walking through policy.

My question is, and I know the answer to this question, but my question is: How many of those meetings were dedicated to the evaluation of the map?

MR. CAGNEY: None.

MR. JARMAN: Okay, thank you. Secondly, are you going to include the Garfield County plan as an alternative in the EIS?

CHAIRMAN MARTIN: That's not putting you on the spot, is it?

MR. CAGNEY: I had a couple of points I'd like to make. Is there any way we can do that?

CHAIRMAN MARTIN: Sure, Jim. This is an open dialogue. We're not trying to single you out or beat anybody up. We're just expressing points of view.

MR. CAGNEY: If we could finish that and then I could make a couple of points in synchrony here, then I'd be happy to finish with the answer to that. That's a pretty loaded question.

CHAIRMAN MARTIN: Okay, thank you. Any other points that you wish to bring out, Doctor,

Zack?

MR. PERDUE: I'd like to just some things about the mapping real quickly. And, number one, I think there's a misunderstanding of the coarsity of the data that we did.

Brad was referencing the fine scale of the 2-meter data. But the data wasn't supplied to the model at a 2-meter resolution. The data was classified at a 2-meter resolution which means something entirely different.

The reason that we classified at the 2-meter level were to, number one, achieve high horizontal delineations in terms of precision, particularly for the forested and woody shrubland areas.

But secondary to that was we wanted to see the mix of species that were occurring in these broader communities. So ultimately the data got boiled back out.

Once it was classified, we then aggregated the data to turn it into polygons, and we enforced a minimum mapping unit of a half acre. So there's no polygons in there representing vegetation communities that exist on the ground that are smaller than half an acre.

In addition, with respect to the transition zones, that was something that we were getting active feedback from in discussions and e-mails with some of the CPW and BLM staff was that there was a recognition that some of these perimeter areas are being utilized by the Grouse.

And so that's one of the inherent limitations to the publicly available data sources is that they're very discrete and they're very coarse.

And as such, for CVCP, for example, we've got a 25-meter, square meter, that represents one area. And that stops with a hard edge, you know, at the transition, wherever that delineation occurs.

One of the things that we were able to do with our data in the fact that we classified it at the 2 meter was we were able to sample and subsequently delineate these transition zones by finding areas that had a certain measure of PJ, Gambel oak, the various woody shrublands encroachment into these areas.

And so what we did was we tried to carve out and assess areas where we've got an upper threshold of 20 percent encroachment of these woody shrublands moving into sagebrush and grassland

habitat.

Which the entire intent of that was to address specifically what we were just discussing a moment ago, which was the recent observation of occupying these fringe habitats around the higher quality of sage communities.

But, in addition, that was also why we employed the fuzzy model logic. As you can see, that returned the largest results in terms of area which is expected.

Basically what it does is it starts to take the results and push it out, make it more contiguous, and so on and so forth.

MR. JARMAN: All right, thanks, Zack.

CHAIRMAN MARTIN: Doctor, you had one more comment?

DR. RAMEY: A couple of more comments. Briefly, this progress report, this habitat mapping exercise is reproducible. However, a number of the opinions you just stated are not.

And where are the data that these opinions are based upon? Those have been requested repeatedly by the County.

I think that the BLM is in a box. I think the County is in revision with its plans. Neither

of those can really wait for your publications to come out years later.

And, most importantly, the Sage Grouse can't wait for you to get around to publication of that before you release any of the data. So we respectfully request that those data requests be followed through with.

Additionally, another point. Peer review is not all it is cracked up to be. Some of the major landmark papers published in physics are published in arXiv, which is an open source journal for which comments come in and revisions are produced. It's a different model. It's considered to be some of the finest science in the field.

So this reliance on that you'll only decide based on peer-reviewed information, as we've all admitted and discussed here is frequently flawed or can be flawed, is I think a dated opinion.

But, finally, and I think probably most importantly, our best guess for determining occupied range map, as you said, the hypothetical models and such, those are not based on data. And those end up capturing large areas of non-habitat.

And that was one of the key points in this mapping exercise is to determine the priority areas

for the birds. And, most importantly, the courts do not agree with opinion-based information.

Judicial deference is not afforded to arbitrary, capricious agency actions or scientific information. And that's what opinion and hearsay are.

And that's been repeated in Aqua Caliente versus Scarlett, on the Peninsula Range as critical habitat. It was remanded for rule-making based on these same arguments we're discussing today at 47 percent reduction. Similar, the Cactus Pigmy for Critical Habitat was remanded and eliminated on the basis of it was on guesswork.

So the courts do not agree with that viewpoint. And I, as a scientist, don't.

CHAIRMAN MARTIN: Okay, now, we're still all friends here. Relax. Take a deep breath.

Jim, you have the floor and the final on this particular level of discussion.

MR. CAGNEY: Thank you, Mr. Chairman, both for giving me the floor and that good advice to relax.

CHAIRMAN MARTIN: Listen, an old rock-and-roller should be able to relax at any place and in any setting. Go for it, man.

MR. CAGNEY: I told you, I can't even play guitar anymore. I got too much Sage-Grouse jelly in my head.

So, first of all, I mean it's plain to see why Garfield County is unhappy with this. Everyone's unhappy with this. I'm still waiting for the first person to tell me. Golly, I really appreciate the way this Sage Grouse thing is going down, you know. The next person that tells me that will be the first.

Okay, so, you know, the idea that you guys are doing something tangible instead of just being unhappy, I say good on you.

But I want to talk about my assignment in relation to some of the things that I've heard today.

A lot of the issues, like the threat is overstated and the public policy type of issue here with regard to whether Sage Grouse really are adaptive or whether they really need to be endangered on that, I'm going to tell you what my exact assignment is.

My assignment is to revise the five land use plans in the northwest Colorado, analyze the NTT alternative as one of the alternatives, and to do so

on a timeline that will be completed in time to inform the court-ordered listing decision.

Okay, so if you're successful in those types of arguments about, you know, whether or not this process should be done that way, again good on you.

And I just want to make it clear that if I don't respond to that, it's not because I'm ignoring you. It's because that's not my assignment.

And my intention is to play out my assignment as it's been given to me. So that's a key point.

One thing that -- I'm going to move on to my next point is that we are not infringing on private property rights in any way. The Bureau of Land Management is doing a round of land use planning for public lands.

I'm aware that the NTT caps relate to all lands. Private landowners are perfectly able to do whatever they want on their private lands, and then the BLM will be obligated to adapt what we authorize to meet those caps.

So under no circumstances are we attempting to tell any private landowners what they can or cannot do on their private lands. Okay?

I want to talk for a second about something that I think is very important. There's a disconnect between the decision-making authority, you know, and the responsibility for winning appeals.

And, you know, I like to communicate with the locals for a couple different reasons. You know, they tend to know the most. It's just good policy.

But I'm talking about this whole cooperating coordinating issue, and I'm going to read something: We are recognizing that each agency has its own planning process and federal agencies are required not only to consider the County's policies but work to resolve conflicts and federal plans consistent with the County's policies. And then it's 43 U.S.C. 17.12.

And I'm all for that. I want to do that. But something that needs to be made, and this is really critical, is what's not quoted from that same passage is it's to the extent consistent with the laws governing the administration of the public lands.

So I'm not authorized to blow this process and lose an Endangered Species Act appeal on the

basis of the Coordination process. Now if we can work together and get something put together that eliminates that possibility, that's great. But I have to win these appeals or break my pick trying.

One of the issues from NEPA, and this is why I was hesitant to answer your question straight up, Fred, is that you asked a different question than what was written in the document.

Okay, the question that you wrote in the document is we request that this be included as the preferred alternative for the Garfield County portion of the EIS.

And if I said yes or no to that right now, that would be a NEPA violation. Because I'm not authorized to make managerial decisions independent of the NEPA analysis.

And, you know, no better case law on that is more than the judge ruling that the Bush Administration overrode the Fish and Wildlife Service's non-listing rule and put this whole thing in motion.

Just on the whole question of winning appeals, one of the appeals that we'll certainly get -- and these appeals are going to be vicious. I used to be the field manager in Lander, Wyoming, and

I just released that document that I worked so hard on when I still lived back there.

And it's like there was this giant backlog of hostility to Governor Freudenthal's plan that they were just waiting for the first document to say that the Wyoming approach is so woefully inadequate, you know. And the Governor's approach is pretty restrictive compared to what just got laid out in the Garfield County approach.

So we have to anticipate some vivid appeals on that subject. And one of them will be that Garfield County is the southern fringe of that habitat.

And, you know, plan on an assumption that this will be depicted as the most important piece of the whole thing. Someone will make that point. I mean I don't want to lead someone to that point in this proceeding, but it's just guaranteed.

The big issue here is the habitat fragmentation issue, the habitat connectivity issue. I don't want to represent myself as a Grouse biologist, especially when there's people that really are Grouse biologists in this room.

But I've been around this piece of ground for 35 years now. And I've seen Sage Grouse in

places that wouldn't meet the Garfield County map model over and over again. So that's an issue, is that habitat has got to be connected.

So in terms of will I include that in the decision, I mean I certainly have to recognize it. It's a NEPA requirement to do so. But I got some concerns, and I'm going to have to deal with them.

CHAIRMAN MARTIN: You followed all the guidelines laid out by NEPA as well as your department policy. You did a good job, Jim.

MR. CAGNEY: This is my job, John.

CHAIRMAN MARTIN: I know it is. I know it is.

MR. CAGNEY: I will get smacked sharply if I'm not.

CHAIRMAN MARTIN: I know it is, and we'll talk over a beer. But, anyway, thank you for that.

Now, Margaret, you had another comment? Okay, but we have one more subject, and that's going to be the NEPA process.

MS. BYFIELD: Okay, I'll wait, I'll wait.

CHAIRMAN MARTIN: Okay. We have about 11 minutes to do that.

COMMISSIONER JANKOVSKY: I would just like to respond a little bit to Jim. You know, with our

plan with our habitat, we are at NSO in priority habitat because the habitat is, you know --

So we're not at a one percent cap or 3 percent cap. We're at NSO, and there's still room in there to move a little bit, but we are in priority habitat and at NSO. So we are more restrictive in our plan than what NTT is or what the PPR was.

And again it all goes back to the mapping. But I just wanted to bring that up.

MS. BYFIELD: Okay, so we start talking about NEPA?

CHAIRMAN MARTIN: We wanted to talk about the NEPA process.

MS. BYFIELD: Mr. Cagney, who is going to make the decision on what alternatives are selected, are included in the draft? Who makes that decision?

MR. CAGNEY: I think from a technical perspective, the precise decision-making authority lays with the State Director. Is that true, Erin, the State Director has got that? The State Director has got that.

I mean I would like to point out, though, if we do a magnificent job of putting this together, we can make that decision because the State Director

will approve it. But if we put something on the table that is inadequate, then we don't get to make that decision.

MS. BYFIELD: Can I go ahead and just read from your planning rules? These are your BLM planning rules.

It says: At the direction of the field manager in collaboration with cooperative agencies, BLM will consider all reasonable resource management alternatives and develop several complete alternatives for detailed study.

Now as I've read these, you make the decision on the alternatives. The State Director selects the preferred.

MR. CAGNEY: Uh-huh.

MS. BYFIELD: So you will be making the decision on what alternatives go in?

MR. CAGNEY: Fair enough.

MS. BYFIELD: The question in the letter that was directed to you was the request of the Board that this plan be the preferred alternative in this area because we believe it's based on the best science and it's the best policies that fit this area.

And I understand how you can't come out

and say what's going to be a preferred alternative because that's a completely different question. Are you precluded from saying whether or not it's going to be included as an alternative?

MR. CAGNEY: No.

MS. BYFIELD: Okay. So the question then is: Will this be included as an alternative when the draft comes out?

MR. CAGNEY: We will certainly acknowledge that this alternative exists and take a hard look at it.

MS. BYFIELD: Is it going to have a side-by-side comparison with the other alternatives and rigorously explored, rigorously analyzed?

MR. CAGNEY: I don't know.

MS. BYFIELD: When are you going to make that decision?

MR. CAGNEY: I don't know.

MS. BYFIELD: When are you expecting the draft to come out?

MR. CAGNEY: July.

MS. BYFIELD: Is the draft now in review with other agencies and counties?

MR. CAGNEY: Cooperating agencies?

MS. BYFIELD: Yes.

MR. CAGNEY: Yes.

MS. BYFIELD: Okay, so already really comments are being taken internally, I understand, internally on the draft, but nobody has the opportunity to lay this plan side by side with it to see how that compares.

I mean and I'll just back up, really the -- as I'm sure you know, the alternative section of NEPA of an EIS is the heart of the section.

And the whole purpose for having reasonable alternatives and making sure all of the different perspectives is included is so that the public and decision-makers have the opportunity to look at all of the options side by side for the ultimate goal of making the best decision.

And when one viewpoint is precluded from that, that should be considered, that's very damaging to the outcome of the actual process.

MR. CAGNEY: Let me answer this line of questioning this way. I have done what I think is a very professional, very fair job of organizing these alternatives in conjunction with the cooperating agencies. And I'm not going to apologize for the process I've run.

MS. BYFIELD: Well, I'm not asking you to

do that. And I'm not questioning your professionalism. You know, in my book that's not even an issue.

The issue is whether or not what Garfield County knows has to happen here for the sake of these Sage Grouse persisting and improving and being here till the end of time, whether or not that is going to be considered in the whole EIS process as an alternative.

MR. CAGNEY: Which is a question I've answered.

MS. BYFIELD: Which is at this point you really don't know?

MR. CAGNEY: Right. You know, anyone familiar with the Roan Plateau case law is very familiar with my requirement to consider alternatives. And I will abide by that.

MS. BYFIELD: Would it be instructive for us to actually communicate with the State Director and impress on her this request? Would that help you in the decision?

MR. CAGNEY: I would invite you to do anything that you think is wise along those lines.

CHAIRMAN MARTIN: But still following the NEPA process and the EIS process. Okay.

Other questions on the NEPA process?

COMMISSIONER JANKOVSKY: I just have some questions on -- you know, we have requests out to CPW for data. We've gone through CORA on those, and we'd like to have that information.

The same thing with Fish and Wildlife Service, we'd like to get Garton, et al, all that information as well just because it is referred to so many times. And we can't get our hands on it in the NTT report.

CHAIRMAN MARTIN: I think you've received your answer, that it's a work in progress, that they're not going to jeopardize that particular issue.

COMMISSIONER JANKOVSKY: Yeah, but I don't know that Garton is a work in progress.

Then just the peer reviews, internal and external peer reviews from the Department of Interior on Sage Grouse, I mean do we have to do a FOIA request to get that information, or how do we go about that?

MS. GELATT: Rob, have you had problems getting information from us?

DR. RAMEY: Well, I've gone directly to Garton, as I've said, to try and get the data. And

so I think the question here is: Can the Service aid the County in obtaining the underlying data used in the analysis by Garton, et al, both the final raw data that is used and also the input data that was culled to produce the final data set?

And then the peer review issue is a very interesting one. And we discussed this amongst the group how best to get -- to evaluate for ourselves, for the public, the adequacy of peer review on that landmark study.

And so since that study was funded by the Department of Interior and since the publication was edited by a member of the Department of Interior, Steven Kinek, as well as many other of the publications in the Sage Grouse monograph.

And I understand that the agency, and the USGS, in particular, has their own internal peer review process before papers go out written by members, by agency staff, we discussed the need to have the peer reviews to be able to look for ourselves at the adequacy of the peer review.

And then also to ask for the peer reviews by The Journal Studies of Avian Biology. And we're not sure whether three of those peer reviews that were commissioned by the Division of Wildlife were

all the peer reviews, and we need to know that.

Peer review is sometimes kept secret. Some journals actually publish them, or at least acknowledge the names. I often sign my name to my peer reviews. So this should be public information since it is such a highly influential scientific study.

So that's the request, peer reviews, data.

MS. GELATT: So if you want to send me an e-mail of that request, I can look into it farther.

DR. RAMEY: I'll let the County do it.

CHAIRMAN MARTIN: We'll run that through our process so that we have the direct control of that particular issue, being cooperating agency status in that respect. So we can rely upon that agreement, right, David? Thank you.

Do we have anything else? We have one minute.

MR. JARMAN: We've got one minute, okay, I'll have to speak very quickly.

This is really for Jim on the NEPA process, but really more through Coordination, but it is supported by NEPA, and that is to resolve inconsistencies.

So we have the Garfield County plan now

adopted and we walked through just some of those inconsistencies with what is at the very least on the NTT report which may be considered as an alternative and the forthcoming EIS.

So the question that we really have for you is: How do you intend to follow NEPA and then help us understand and pick apart and come to resolve on inconsistencies between our plan and the EIS?

MR. CAGNEY: I don't know the answer to that. I would agree that that needs to be done.

MR. JARMAN: Would you be willing to work with us to do that?

MR. CAGNEY: Sure, absolutely.

CHAIRMAN MARTIN: Between now and the final product, but not after the final product.

MR. JARMAN: Well, in the draft is really the issue at play here. So that's really the question is: Can we work together on this following NEPA to be able to have that discussion as it's reflected in the draft?

CHAIRMAN MARTIN: There is a hard timeline, isn't there, Jim, in reference to when you have to have that in?

MR. CAGNEY: I got a question for you,

though. I mean there's a very, very delicate issue there in terms of my inability to disclose predecisional information.

So are you talking about in a cooperating agency process or are you talking about in public hearings? Because that really matters what we can say and what we can do regarding the range of the alternatives that we already had on the table.

MR. JARMAN: I don't think, other than NTT, we can't do it through Coordination. It would have to be predecisional.

MR. CAGNEY: Well, then I'm precluding from addressing some of the things that we've worked out through the cooperating agency process that I think deals with some of these issues.

MR. JARMAN: That's a really good point, Jim. So I think there are ways to do that simply between Garfield County and the BLM in a cooperating agency type meeting, to protect that issue that you rightly bring up.

CHAIRMAN MARTIN: We don't want to violate that.

MR. JARMAN: Yeah, absolutely.

CHAIRMAN MARTIN: We want to be able to work those out through the process as set out again

by cooperating agency status. But we still have to answer certain questions to our general public in public meetings.

So we'll have a fine line to walk, but we will do so. And I wish we had the ability, as some departments, to not answer certain questions. But we have to expose our entire souls in public meetings and still stand the scrutiny in the newspapers when we don't.

So you guys got a little better situation than local government does. We're under a lot more scrutiny.

MR. CAGNEY: I mean just for conversation sake, I feel comfortable suggesting that when we talk about the full range of alternatives, this document is within that range because the Alternative A, which is already public knowledge, is simply the old land use plans that relate to Garfield County.

And I think we would be completely safe in arguing that this is between this, those old plans and the NTT, with one giant exception to that, and that, of course, is the map. We would be introducing a new map at this stage of the process.

CHAIRMAN MARTIN: We'd better have a good

foundation on one and be able to go ahead and produce that or reproduce it, et cetera, following the same process. And would expect again your map and the discrepancies we find and how you would be able to defend that particular map in the discussions.

MR. CAGNEY: Right. And Garfield County understands my concern that by abandoning our longstanding process of working with Game and Fish Agencies, we leap into a void that will just kill us.

CHAIRMAN MARTIN: And, Jim, we're not asking you to do that. All we're doing is saying we need to see the scrutiny of how it was put together and believe in the process as well as believe in our process and convey that both to the Division of Wildlife and you so that we can go ahead and make sound policy judgments on the information that we can reproduce.

That's where we're coming from. So that's what we would support.

Gentlemen, we're four minutes beyond. Is there anything, Wildlife, David, Jim, anything else, Brad? Anybody out there? Moffat County, Rio Blanco County, you're all cooperating agency statuses.

Then our team, the last comment.

MS. BYFIELD: Well, I was just going to make sure, we didn't allow you a chance to even comment, talk. I didn't know if you had any statements or anything that you wanted to share.

MS. GELATT: I appreciate the invitation. Today lots of information was provided. I just received the report on Monday so our biologists haven't had an opportunity to review it. But thank you.

CHAIRMAN MARTIN: All right. Staying within those parameters, I think that we're completed then. We'll try and work out and we'll have coordination and communication going back and forth, Jim. Thank you.

COMMISSIONER JANKOVSKY: I'd like to thank everybody for being here. Thank you for your time and working with us. Thank you.

CHAIRMAN MARTIN: Thank you very much. And everybody got a full package of information from Garfield County to try and digest.

(The hearing was concluded.)

REPORTER'S CERTIFICATE

STATE OF COLORADO)
) ss.
COUNTY OF ADAMS)

I, Geneva T. Hansen, do hereby certify that I am a Professional Shorthand Reporter and Notary Public within the State of Colorado.

I further certify that the foregoing transcript constitutes a true and correct transcript to the best of my ability to hear and understand the audio recording.

I further certify that I am not related to, employed by, nor of counsel for any of the parties or attorneys herein, nor otherwise interested in the result of the within action.

IN WITNESS WHEREOF, I have affixed my signature and seal this 16th day of May, 2013.

My commission expires 11-18-15.

_____

Geneva T. Hansen