

# CASCADE-SISKIYOU NATIONAL MONUMENT WORKING GROUP: STUDY OF LIVESTOCK IMPACTS

## Meeting Notes August 13, 2004

Members Present: Rose Marie Davis, Cate Hartzell (part), Bob Horton, Ed Kupillas, John Roth, Anita Ward (alternate)

Members Absent: Gene Bowling, Romain Cooper, Mark Grenbemer

Presenters: Paul Hosten, Brian Barr

BLM Staff Present: Howard Hunter, Kimberly Hackett

Public Present: Bob Miller, Frank Lang (Cate's alternate), Ron Brown (Channel 2)

Facilitators: Jon Lange & Terry Morton

### *Update on BLM Studies*

Paul reported that he continues to collect data, within and outside the exclosures. He is also using turn-of-the-century photographs, in comparison with repeat photos, to determine changes on the landscape. He tracks patterns of vegetation change over the time of year, and is mapping out livestock water sources. Jeff LaLande, the historian for the Forest Service, has been helpful in studying patterns of livestock use. By integrating both the exclosure studies and historical information, he hopes to be able to evaluate short, intermediate and long-term impacts of livestock grazing.

His plans are to begin writing up various aspects of the Study of Livestock Impacts later this year, submit them for publication and gather peer review comments to improve the studies. He will be integrating Gene Hickman's work inventorying current & past vegetation changes, as well as GIS studies. Ultimately he will present data that pinpoints locations by GPS and are relativized by water source, distance from roads, past management activities (scarification, seeding and herbicide use as well as grazing). The value of GIS is that numerous various studies can be linked, and the summary value is greater than the individual parts.

Bob Horton asked whether there would be a literature review of alternative management strategies, and Paul clarified that while there would be a summary of the literature, he would make no attempt to evaluate strategies or make recommendations. His neutrality as a scientist is critical. However, the data should provide insight into the implications of the current strategies.

Data will be collected into 2006, and then the NEPA process will be initiated, which will include involving the public in the development and selection of management alternatives; presumably these will include various alternative strategies for managing livestock grazing.

Terry asked what Paul he would like to be able to study, in addition to what he is currently doing, if funding were not a constraint. He identified two items: (1) surveys of riparian Proper Functioning Condition across the Monument, and (2) collecting more historical information from ranchers. Some of the local ranchers have been on or around the Monument for several generations, and their knowledge can contribute valuable ecological insight that is available nowhere else.

### *Relationship between the Rangeland Health Standards & Guides and the Proclamation*

Discussion followed regarding whether the Proclamation called for a “higher bar” than the Standards & Guides. Ed noted that, while the Standards & Guides were developed to deal with grazing and were generally accepted by all interests, it was possible to meet the Standards & Guides and *not* the standard set by the Proclamation – *all* objects of biological interest must be protected, as well as maintaining a generally healthy ecosystem.

Terry clarified that, in her & Jon Lange’s meeting with Tim Reuwsaat that morning, he had clarified that *both* the Proclamation and the Standards would be used in evaluating future grazing on the Monument, i.e., management practices would have to “pass muster” on *both* yardsticks. Paul added that, while he believes it is an uncomfortable marriage, the Standards & Guides do provide a good framework to use, with measurable indicators of the different ecosystem components. John Roth noted that both the Standards & Guides and the Declaration are somewhat vague, using words like “incompatible,” which is not a definitive measure. That means that, in the end, the BLM will have to interpret what that means.

### *“Additional Studies”*

Brian Barr has been working for the World Wildlife Fund (WWF) for the past three years, and is the Program Officer for Klamath-Siskiyou issues. He is a fisheries biologist, and his background is in the impact of hydropower on salmon, both in developing mitigation measures and in tracking compliance. He explained that, while the WWF has great respect for the work being done by Paul Hosten and the BLM, they were concerned about some of the items that were not being studied, particularly the lack of study of impacts on specific animal species. They raised money to commission expert scientists to conduct five studies, and are hopeful that they will begin work on a sixth this fall. Brian outlined each briefly, adding that the principal investigators of each could be brought to a future PAC Working Group meeting if desired.

- 1) Green's Mariposa Lily, Evan Frost, Plant Ecologist: Evan is evaluating how specific, previously surveyed populations have responded since original surveys, under the existing level of livestock use and timing. He has two years of field data on conditions before and after grazing, which he will be analyzing this fall, and results will be sent for peer review in the spring.
- 2) Butterflies, Erik Runquist, PhD Program at UC Davis: Erik has been studying butterflies on the Monument for more than half his life, and is tracking their abundance and diversity across varying degrees of livestock use in oak woodlands and mixed conifers in this research project. He will complete his second year of data collection this fall, and will be preparing a manuscript for peer review in late spring or early summer.
- 3) Springsnails, Terry Frest, Geologist/Malacologist: Terry is investigating whether snails are present or absent in 80 different springs, as correlated with the level of livestock use and other land use issues at each spring. Results will be out in the spring, after this fall's field sampling (which will be the second of two field seasons). Manuscript preparation should follow shortly. Brian pointed out that integrating Paul's data could be very helpful here, and wanted us to recognize the inefficiency of keeping the BLM & WWF studies completely separate, rendering both less effective than they could be.
- 4) Birds, John Alexander, Klamath Bird Observatory: John is tracking differences in numbers and diversity of birds across different classes of livestock use. He is including 500+ survey points along both riparian and upland transects in oak woodlands and mixed conifers. This spring was John's third and final season. He is currently analyzing results, and expects to submit papers for peer review this winter.
- 5) Small Mammals, Aaron Johnston, Master's candidate: Aaron is addressing the question of whether there are differences in numbers and diversity of small mammals in areas that experience different levels of livestock use. He uses live trapping at 16 sites, and each site includes both riparian and upland habitat types. This fall will be Aaron's second field season, and results should be prepared for peer review by late summer 2005.

In addition, the World Wildlife Fund has applied for funding for the following project:

- 6) Riparian & Stream Habitat Condition, Jack Williams, SOU & now Trout Unlimited: study in 20 pools and 20 riffles in various livestock use categories regarding habitat features that relate to trout abundance, condition of banks, channel depth & width. Field work would commence this fall and possibly continue next year, pending available funding.

When asked about peer review of the studies, Brian explained that the WWF process is as follows:

- Study design (involving peer scientists' input)

- Data collection
- Data analysis
- Write-up of results in manuscripts for submittal to journals that require peer review

Regarding the Proclamation's wording, "impacts" and "compatibility," the operational definition used by WWF is "a statistical difference related to the research questions." If, at the end of the peer review of their studies, they believe the impacts are statistically significant, they will approach the BLM to advocate for their research being included in the decision-making process. Brian added that all WWF studies have been funded through foundations and private donors.

### *Adequacy & Sufficiency of the Studies*

Bob Horton asked both Paul and Brian whether they believed that all the studies being currently conducted were "adequate and sufficient" to determine the impacts of livestock grazing, in accordance with the Proclamation. On the one hand, Paul believes that the multiple lines of study have created an adequate and sufficient study design. However they both agreed that, since the studies were not complete, it isn't possible to determine adequacy and sufficiency at this point, particularly without incorporating results of peer reviews. They also noted that the limited number of controls (areas without cattle use against which to compare) as an existing constraint. While Paul had initially proposed 30 exclosures, the number had been limited to 12, only 8-9 of which are now usable. He has however been able to use a few other areas close to the Monument.

When asked whether we were missing any of the objects of biological interest, Paul & Brian noted insects, fish, and macro-invertebrates. John Roth pointed out that it may not be necessary to measure every single object of biological interest, but rather those plants and animals most impacted by grazing. Paul agreed, and explained that his decision to focus on vegetation had been because it is most reflective of livestock impacts on *habitat*, and therefore wildlife species.

Jon Lange raised the question of credibility of the WWF studies once more, given their role as an advocacy organization. He wanted to hear if there were still concerns. Ed stated that even an advocacy organization can sponsor studies that are done scientifically and peer reviewed, and therefore potentially valid. When asked what would allow him to trust the research conducted by WWF, Ed responded that conducting the studies, ensuring peer review, and refraining from advocacy would assure him. Bob Horton felt it was inappropriate to ask them to cease their advocacy, as they are an advocacy organization, but rather that they clearly separate the two activities. John Roth added that it's hard to evaluate the validity at this point because the studies are ongoing, and asked that they publish their results in journals with

reasonable rejection rates (as compared to journals with extraordinarily high rates), so the studies will be more likely to have the opportunity for review. He also suggested that dissertations or theses that are written based on these studies also be admissible, as they are an alternative form of peer review, and that anecdotal information be included as well. Bob Horton pointed out the difference between proposed actions and policies, which incorporated a number of factors, and basic research. From his perspective, the basic research being conducted by both Paul and the WWF appears fully credible. Rosemarie added that she is glad that there are interested organizations like the WWF willing to seek additional funding to help the BLM fulfill the mandate of the Proclamation. She also noted that the fact that the WWF was conducting more than one study by more than one scientist added to their credibility.

### *Public Comment*

Frank Lang submitted a document on LIDAR (light detection & ranging) for the subcommittee's review, which involves aerial photographs of the landscape and was recommended by the OSU Peer Review. Paul agreed, noting that there is now high-resolution imagery of about  $\frac{3}{4}$  on the Monument, and although they have analyzed them for basic information regarding the impacts of livestock grazing on vegetation near livestock watering holes, there is much more information that could be gleaned from them if additional funds were made available.

Anita Ward pointed out that the Proclamation focuses on determining whether there are *impacts* on objects of biological interest and sustaining ecosystem dynamics, which is more compelling than the more subjective assessment of "compatibility."

Bob Miller expressed concern about the costs of the studies to the taxpayer, not only of the current studies but all the additional things recommended by the OSU Peer Review to make the studies better. He believes it would be reasonable for the Working Group to recommend that government programs work more efficiently, which in this case would mean calculating the costs of the studies, dealing with environmental and agricultural interest groups, litigation and peer review. He also believes it will not be possible to arrive at a responsible decision by 2006 as specified in the Proclamation, as this is a monumental scientific determination. The consequence is that ranchers are left stranded, with investments they cannot sell because of the unpredictability of the outcome. Plus, if anyone gives up his/her lease, it is mandated by the Proclamation that it must be retired rather than sold. That's why they're working on a buy-out and believe it's a win-win solution: it gives them predictability, at a savings to the taxpayers. Paul pointed out that the studies are for the impacts of far more than cattle (e.g., OHVs, proximity to roads, etc.). Howard added that most buy-outs that have been done are with third parties (usually environmental), and the BLM can't initiate them. Bob Miller reminded us of the Steens, where Congress included a buy-out as part of the deal.

Bob Miller also resisted the characterization of the Proclamation connoting a “higher bar,” as if there were a detriment to one species, cattle would be off the Monument. He wants positive impacts to be weighed against negative impacts in the decision. He also asked whether, if the Cattlemen funded a study, they would be allowed to sit at the table. Bob Horton assured him that they would be welcome, and subject to the same requirements as the WWF regarding credibility, peer review, etc.

### *OSU Peer Review*

In looking over the OSU Peer Review, we noted that some of the recommendations had been made in the public comments to the first draft of the Study. Rosemarie pointed out that, in her work with the Mid-Coast Watershed Council, she had found that snorkeling surveys (recommended in this Peer Review) were conducted very inexpensively. Ed was concerned that the Peer Review itself might lack some credibility, given the poor grammar and lack of clarity in the first sentence. He was also concerned that snorkeling surveys would not be useful without baseline data. John Roth expressed the belief that the vegetation studies were sufficient and adequate.

Jon Lange asked whether there were concerns about the credibility of this Peer Review. Howard gave the backgrounds of each reviewer: Dave Pyke is a nationally recognized research rangeland ecologist for USGS; Bob Beschta is a hydrologist and watershed expert, professor emeritus at OSU and well respected in his field; Bob Anthony is a research wildlife biologist for the USGS, specializing in research and technology transfer, and is familiar with the Monument; and Patricia Muir is an OSU professor and plant ecologist with expertise in statistics. He added that they did a serious search for reviewers, and these four were the most expert and objective individuals they could find. We asked Bob Miller whether he thought the ranchers would trust the Peer Review, and he said he would check with his resources to evaluate the credibility of the reviewers.

In response to the recommendations of the Peer Review, Paul questioned whether the enclosure size they recommended was appropriate for these purposes. He had followed the recommendations of John Menke at the beginning of the Studies, which was supported by the literature review, and believes what exists is adequate. There are of course a number of areas where dialog will be useful, and he hopes the Public Participation/Science Meeting will be appropriate for that. Terry asked whether their recommendation for additional studies of wildlife took into account those currently being conducted by the WWF, or whether they believed there were still more additional studies needed. Paul said he believed the WWF studies would take care of their concerns, but we’ll ask them at the Public Participation/Science Meeting.

Ed asked about the Peer Review’s recommendation regarding water quality measurements, again because of the lack of a baseline measure. Paul responded that

there were actually thermographs in many creeks, and he believes the monitoring is better than what was reflected in the Peer Review, although the problem is still relating changes to particular causal factors.

When Jon Lange asked the Working Group whether they might consider making any recommendations to the BLM regarding the Peer Review, Ed replied that, unless he finds out that one or more authors are not competent or credible, he would accept the Peer Review as valid and recommend that the BLM consider it. John Roth seconded that opinion.

Cate asked if Paul and other BLM staff working on the studies could articulate their responses to the Peer Review in writing, so that they could be addressed at the Public Participation/Science Meeting. She recommended organizing responses into three areas: (1) They didn't realize . . .; (2) Yes, but there were these constraints . . .; and (3) Good idea. Howard pointed out that the BLM received this document at the same time that we did, and they haven't sat down as a staff to decide what to do with it, so reports of that kind would be premature. He is however planning to make additions to the studies in response to the Peer Review recommendations, and has requested additional funding for that.

### *Field Trip*

(See handout appended at end)

The Working Group identified the purpose of the 9/13 field trip as being to gain hands-on experience of the Monument and the Studies, seeing what they're reading and hearing from presenters. They also identified a number of things they would like to see:

- Exclosures
- Bird station
- Riparian area
- Weeds
- Spring mollusks
- Photos for historical comparison
- Variety of potential causal disturbances
- Other plant communities
- Areas where there is no grazing or only light grazing
- Soda Mountain area

Paul suggested an area on Soda Mountain where the Working Group would be able to see an exclosure, livestock impacts, riparian areas, a bird station, a spring with potential for threatened and endangered mollusks, and weeds. He also has comparison photos for this site, aerial photographs that were taken in 1939.

Gene Bowling is inviting two people from the ranching community to attend the tour, and the group agreed to ask Romain Cooper to invite two from the environmental community (perhaps from the Soda Mountain Wilderness Group). We will invite all four representatives to comment but not be presenters, as the focus is on learning and not advocacy. We will also give them the Ground Rules we developed (changing the wording of the title from "Communication" to "Conversation." The public will be welcome, but public comment will be limited as the purpose of the field trip is to educate the Working Group on the physical environment and studies about which they will be making recommendations.

We plan to meet at the Forest Service parking area in Ashland, and the BLM will provide transportation. The meeting will be advertised and the public will be asked to respond by 9/6 if they would like to join us.

### *Science Meeting/Public Participation*

(See handout appended at end)

The Working Group will invite a group of scientists to have a conversation about the Studies & Peer Review, to help the Working Group understand the areas of agreement and disagreement regarding the Studies and be better able to make recommendations. Included will be one scientist trusted by the environmental community, one trusted by the ranching community, Paul Hosten as the BLM scientist, one scientist conducting an additional study (perhaps John Alexander), and Dave Pyke, the chief peer reviewer. If Pyke is trusted by the ranching community, and if Hosten or Alexander is trusted by the environmental community, there do not need to be scientists in addition to those three.

The meeting will be on Friday, September 24, from 3:00-7:30pm. We will look into reserving the Extension Office for the meeting, and we will do a press release and also consider videotaping the meeting and making it available on public access TV.

John Roth asked Bob Miller whether Dave Pyke would be considered trustworthy by the ranchers, and he wasn't sure and will check with them. He suggested John Menke would be excellent. Paul said he would not work with Menke, given past problems between them. We discussed what to do about this – Exclude Menke and ask the ranchers to select someone else? Ask Paul to meet with Menke, despite their past problems? Exclude Paul and invite Menke? Rosemarie asked whether there Bob Miller could draft a list of acceptable scientists (perhaps including Kruger, Burkhart, or Leonard), and Paul & Howard could review it and hopefully find at least one name in common. Bill Kruger, Wayne Burkhart and Steve Leonard were mentioned. Ed will work with Bob Miller to see what they can come up with, and Terry will follow up with them, Howard and Paul. Paul understood the difficulty of finding someone else, and

he said he would be willing consider working with Menke in this way. Jon Lange encouraged him to “sleep on it” so he was sure, and said he and Terry would follow up with Paul next week.

### *What's In & What's Out*

The Working Group noted that they had had one item in the “What’s Out” category, i.e. what is outside the parameters of recommendations they might make to the BLM at the end of this process. They had agreed that issues of “scientific methodology” would not be appropriate for recommendations. As Cate had expressed continuing concern about the issue of boundaries on recommendations the Working Group might make, and she had to leave early, the Working Group asked that she share any additional parameters she would like to see via e-mail for group consideration.

<b>Next Meeting:</b>	<b>Field Trip on Monday, September 13, 8 am - 5pm</b>
<b>Location:</b>	<b>Pickup &amp; drop-off at the Forest Service parking lot in Ashland</b>
<b>Food:</b>	<b>Bring your own lunch, Terry &amp; Jon Lange will provide drinks</b>

## APPENDIX A

### FIELD TRIP

#### PURPOSE

- Study-oriented
- General information-sharing, not advocacy
- *Get hands-on experience of the Study & Additional Studies, enough to know what the documents are talking about*

#### WHAT

- See some study areas
- See exclosures
- See the effects of grazing & how they measure them
- See some of the objects of biological interest & ecosystem dynamics

#### WHO

- Working Group, Jon Lange & Terry, Howard, *Kimberly*
- Paul & one “additional study” scientist (*John Alexander, Klamath Bird Observatory*)
- 2 lessees
- 2 trusted by the environmental community

#### WHEN

- *Monday, September 13, 8-5*

#### WHERE

- *Begin & end at BLM/Greensprings Inn?*

#### ACTION ITEMS

- *WG suggest areas they would like to see*
- *Invite 2 trusted by environmental community (Soda Mountain Wilderness?)*
- *Advertise (space is limited)*
- *Invite media (Paul Fattig)*
- *Develop/publish Ground Rules to ensure learning, not advocacy*
- *Arrange transportation*
- *Meal/brown bag*

## APPENDIX B

### PUBLIC PARTICIPATION/SCIENCE MEETING

#### PURPOSE

To educate the public (further) on what's being done with regard to studying grazing impacts on the monument.

To get additional input from the public about the studies.

To help determine possible recommendations

(We should advertise accordingly)

**WHEN:** September 24, 2004

**WHERE:** To be determined

#### WHO

- a. Paul
- b. Peer Review scientist (Dave Pyke has tentatively agreed)
- c. At least one scientist involved with the "additional studies"
- d. A scientist trusted by environmental community
- e. A scientist trusted by ranching community

#### WHAT

- o Scientists make short summary statements that will include a discussion of their work, and (for some of them) their reaction to the BLM study and the additional studies. (More on this to be determined.)
- o With Jon Lange and Terry facilitating, there then would be some portion of time for interaction among them, in front of the public, as they talk about the different factors and questions that come up.
- o Next, the public could ask questions of different scientists. Some interaction could be possible.
- o This would be followed by a public comment period, with comments directed to the PAC Work Group.
- o Perhaps the science team could have a chance to react to the commentary.
- o Close.