

National Forest Advisory Board (NFAB) Meeting
April 18, 2007 – 1:00 p.m.
Forest Service Center, 8221 South Highway 16, Rapid City, SD

Members Present:

Tom Blair, Chair; John Culberson representing Jim Heinert, Vice Chair; Bob Kloss, Jim Scherrer, Donovan Sprague, Hugh Thompson, Matt Hoobler, Bob Paulson, Aaron Everett, Becci Jo Rowe, Mac McCracken, Nels Smith, Pat McElgunn, Doug Hofer, and Everett Hoyt.

Forest Service Representatives:

Craig Bobzien, Dennis Jaeger, Mike Lloyd, Beth Burkhart and Twila Morris, Recorder.

Others:

Five members of the public and Congressional representatives were in attendance.

Members Absent:

Jim Heinert, Ron Johnsen

Welcome and Roll Call:

Chair Blair: Quorum present, called the meeting to order.

Comments to the Chair:

Jaeger: Handed out updates to the NFAB notebooks.

Approve Minutes:

Chair Blair: Are there any changes to the March minutes?

Rowe: There word “signing” was misspelled on the last page of the minutes.

Morris: Thank you, that has been corrected.

Motion made to approve the March minutes as reported, motion seconded.

Blair: Motion carried, the March minutes stand as reported.

Approve Agenda:

Chair Blair: Are there any changes to the agenda?

Bobzien: Craig Kjar is sick; Mike Lloyd will be representing him today.

Motion made by McCracken to approve the agenda as presented, motion seconded by Thompson.

Blair: Motion carried, the agenda stands as presented.

Housekeeping:

Bobzien: Reviewed the layout of the building. Frank Carroll has a family emergency and will not be in attendance today.

Meeting Protocols - Issues:

Chairman Blair: As a reminder of the protocol on public comments, when a primary board member and their alternate are in attendance, comments from the alternate must be saved for the public comment period. If the alternate is in attendance when the primary is not, the alternate will be at the table and may offer comments during the meeting.

Blair: Apologize to Bob Kloss for not getting to his topic on Biomass last month. This topic will be covered first under the regular agenda.

Hot Topics

Court Ruling on 2005 Planning Rule ~ Craig Bobzien:

Bobzien: When we published the agenda, we thought we would have an update, but there have been no projections on the California decision that challenged the 2005 planning rule.

Scherrer: Who is our new representative on the Board from a National Environmental group, and what information can they provide about the affect this will have on the Black Hills?

Rowe: Becci stated that she is the new representative for the Norbeck Society, and said she would find out about the impact.

Everett: Aaron stated that there is no affect on the Black Hills from this decision. Phase Two was processed using the prior regulations.

Scherrer: Does that include the additional 1.4 million dollars we just received?

Everett: Yes it does include the money we just received; the decision has no affect on the Black Hills.

FY 2007 Forest Budget ~ Craig Bobzien:

Bobzien: We did receive the additional money. With this money, we will address hazardous fuels, insects, and Forest health.

Travel Planning ~ Schedule Update ~ Craig Bobzien:

Bobzien: On April 10th, I attended a large Off-Highway Vehicle (OHV) user group meeting, there were 150 to 160 people in attendance. The Norbeck Society also invited me to their meeting last month, which I did attend and spoke on the OHV issue. Scott Carbonneau also attended the meeting, and as a member of the Governor's Task Force on OHV, was helpful in addressing the questions that came up regarding the Task Force. There were a lot of questions about current closures and what to expect this spring.

Some of the topics we covered were why collaboration is important, why the recommendations from the Chief are so important, and whether or not our proposal reflects the NFAB recommendations as well as the public comments. In many of the areas, we had good public involvement. Our part is to keep the integrity of the

input, track all the input we received, and then schedule our public meetings. The public meetings are tentatively scheduled for the week of May 21, 2007. We'll use a similar format as our first round of public meetings, scheduling them for Monday through Thursday. After we receive public comments, we'll start to develop alternatives.

Scherrer: Will you be rolling out the draft map at the May public meetings?

Bobzien: Yes the proposed action will be a draft map.

Blair: Will the Forest Service continue to do mapping? There are obviously more trails on the ground than what you have mapped.

Bobzien: These are the trails submitted by the user groups; they may not have submitted all of them.

Blair: We've talked for three years now about the 8,000 to 9,000 miles of trails in the Black Hills and the 3,700 miles you have mapped is a little less than half of that. What will happen to the non-submitted trails?

Bobzien: A lot of the submitted trails are parts of roads on the Forest Service system.

Blair: Were they included in the 9,000 mile figure we had been using?

Bobzien: Of the 3,700 miles, more than half were existing roads.

Blair: The question will be asked, is the Forest Service only going to approve 3,700 miles of trails.

Bobzien: No. it could be more or less. We'll be approving a trail system that will be for all kinds of uses, comprised of mixed use and some limited uses, like two track. But it may not be a trail that a member of the user group specifically asked for. There were also single track routes included in the suggestions.

Newcastle Office Update ~ Craig Bobzien:

Bobzien: Last week there was a flurry of activities regarding the Hell Canyon office located in Newcastle. The Black Hills is going to build a new District office in Custer for the Hell Canyon Ranger District. We will maintain a presence in Newcastle and we are currently evaluating what type of operations we want to maintain in Newcastle. There is a tangible benefit to having a presence in a community. Dennis Jaeger, Mike Lloyd and I have met with all the affected Agencies, and the community, but somehow through all of this, they are assuming that we are going to close up shop and pull out of town. There is not and has not been a plan to close the office. We have asked the Newcastle community what services are important to them. One of the things I shared at the public meeting was the cost for the Newcastle lease, which is for 15 employees and is the same as the cost for the Northern Hills lease which is for 60 employees. This is a cause for concern from a fiscal standpoint. We have looked at the possibility of a co-location with the State.

REGULAR AGENDA

Biomass Subcommittee ~ Bob Kloss

Kloss: I would like to personally welcome the new members. The members who have been here for a few years can relate when I say, the learning curve for keeping up with Forest matters is steep. I have time because I'm retired, and can read a lot and keep up, it's amazing to be retired and have the extra time.

One of the current issues is the amount of talk, action, and interest in the issues of what to do about the energy crisis in this Country. This is a hot topic, we have more than a trend here, what we have is a movement. When something becomes a movement you have people all over the country thinking the same way, but there's really not a definition of where things will go. People are just experiencing the same things.

The whole idea of biomass is reflected in the many new words and concepts that are facing us. An article titled "Woodstock Revisited" is an example; it means that there is a movement out there. Treethanol is another term that is surfacing. Treethanol is ethanol from trees rather than corn.

Last fall when the Biomass Reduction Action Group (BRAG) met, I took the liberty to write a mission statement.

Bob organized some of his readings and findings, and had a few questions to present. Today's discussion paper is titled: *Biofools vs. Ecoimagination.Com, or Forest Biomass Use in the Black Hills.*

1. What have we done with forest biomass?
 - a. In the past we haven't done much, but I think that is changing. International Earth Day, 1970 changed everything. Environmentalism, ecology, and global realization were all introduced along with the Clean Air Act, Clean Water Act, NEPA, EIS's, etc.
2. What are we doing with Forest biomass?
 - a. From what I've learned, our forest is pretty fast growing and regenerates itself fairly fast.
 - b. Biomass could be considered the fifth threat of the Chiefs four threats, this is a monumental movement. Whether or not the Board fits into this remains to be seen. There is a tremendous amount of research and development and the President has mentioned this in two different speeches. The rest of the world is ahead of us on this, and we are trying to catch up.
3. What can/must we do with forest biomass?
 - a. We have a couple of projects that have been recently approved.
4. BRAG's overall mission statement:
 - a. *To make it a priority of the Black Hills National Forest to develop and implement a sustainable Forest Biomass Use Plan for better managing of fire, disease, timber, recreation, and other multiple uses of the forest and therein providing for conservation and protection of the forest.*

Biomass Utilization Communications Tool:

Air Quality

- Potential benefits: Maintaining good air quality by reducing wildfire and prescribed fires emissions; carbon trading and or emission reduction credits; reducing greenhouse gas production.

Forest Health

- **Forestry**
 - Potential benefits: Reducing unnatural forest density; reducing risk of mortality to insect, disease or drought; increasing forest fiber production; timber and small wood products.
- **Wildlife**
 - Potential benefits: Creating wildlife habitat (protection of snags, downed logs and other desired habitat components, precise application of desired vegetative conditions).
- **Watershed management**
 - Potential benefits: Watershed improvement (reduced risk of fire damage); reduced and avoided sediment delivery; reduced turbidity; water yield increases; stable flow patterns (providing more water later in the year due to less vegetation – a strategy employed by PG&E in California to increase summer water yields for hydroelectric use).
- **Fire Management**
 - Potential benefits: Property value protection (homes in a fire safe community); protecting critical infrastructure (schools, industry, utilities, etc); avoided costs of suppression; reduced costs for prescribed fire and reduced risk of escape.

Waste to Energy

- **Landfill Diversion**
 - Potential benefits: Reducing landfill quantities; avoiding new landfill development (siting, permits, construction costs); ease of recycling.
- **Energy Security**
 - Potential benefits: Renewable energy, reduced fossil fuel use; domestic energy security (avoidance of foreign oil imports); market value of green power; national security issue when Alaska Oil Pipeline or an Army/Air Force base is temporarily closed.
- **Grid Stability**
 - Potential benefits: Distributed energy; line voltage support; off-grid systems; grid stabilization; firm capacity (24/7 availability).

Social Benefits

- **Rural Jobs**
 - Potential benefits: Economic stability to rural, forest-dependent communities.
- **Recreation/Scenic**
 - Potential benefits: Improved recreation and scenic values vs. catastrophic wildfire; continued opportunities for hunting, fishing and camping; tourism and rural community impacts.

Public Health

- Potential benefits: Lives saved (potential due to public health and wildfire losses) and public health maintained.

Lost Productivity

- Potential benefits: Avoidance of lost productivity (due to smoke or damage to infrastructure).

Bobzien: Regarding “Carbon Trading”, what is your perspective on the uses and incentive as it relates to biomass?

Kloss: Carbon Trading involves coal plant emissions and reductions. One operation could have a higher emission if another plant had a lower emission. Only seen it in power plants, but have not seen it in the forest.

Hoobler: Wyoming has a carbon trading program. A plant can purchase credits to offset their emissions. We are currently completing the third study.

Kloss: Whatever is available, we want it on the Black Hills.

Bobzien: Are federal lands part of the equation or just private land?

Hoobler: Private and State Forestry in the state of Wyoming. Test plots were done in the Black Hills for State forestry. The information is closer than you think.

Blair: Please explain; companies are able to buy carbon units, are they limited to what they are trying to offset?

Hoobler: There is currently not a carbon cap, if you put a cap on it, it would limit it. That is the goal of the State of Wyoming. We have been approached by numerous companies saying they want to track this.

Blair: Can you give an example?

Hoobler: Emissions standard.

Kloss: The power operation in Beulah as an example, or Co-Ops that have other sources of energy. They are required to get 10% to 20% of their energy from alternative sources. If there's a high emission carbon going on at the Beulah plant and they are doing alternative energy from wind mills for example, then they are doing the trade off and get credit, to reduce emissions. This is only in the electric power production plants. Individuals can do this too, if you have a solar panel on your house, you can get "green" credits for this.

McCracken: The PUC of South Dakota brought forward legislation about purchasing credits. I will visit with Mr. Johnson and bring back a report to NFAB.

Thompson: In particular air sheds, such as Salt Lake City, they have capped their emissions. If an outfit wants to come in and manufacture something, they have to acquire the credits from within the air shed. Some companies have credits to sell, so that within the air shed, it doesn't get any larger. The value of the carbon credits will be somewhat less in South Dakota because there are no caps, but in Los Angeles, Salt Lake City, etc., they are high.

Blair: The design then, is to either keep the status quo or reduce the emissions.

Thompson: It becomes a requirement to not add any more carbon credits. So there is an active market for buying and selling the credits.

Smith: We have the ideal situation, because Wyoming and South Dakota have done a decent job of maintaining air quality. Wyoming has done a good job of putting carbon credits into place. As a matter of public policy, it boils down to: 1) You can buy the right to pollute, and 2) Some of the biggest advocates of this program will be the brokers in the middle.

The situation in Salt Lake City is, there is recognition that they may not be able to clean it up. Cities like Los Angeles and Salt Lake City, you can't clean it up without turning its economy on its head. As a matter of overall national policy, it has the two flaws that I'm mentioned.

Kloss: To my knowledge there are only three places with CO2 monitoring. We don't know what we have for emissions in controlled burns, etc. We need CO2 monitoring for the whole forest and Wind cave, Jewel cave, Rapid City, etc. Forests are what eat up CO2, so we need to manage the forests well.

Smith: There is a distinction between continuous emissions resulting from a process and temporary emissions from fires, etc. There are cleansing benefits from the smoke for the air. The temporary process is different than the continuous process. The distinction needs to be kept in mind.

Kloss: There will be a Forest Biomass Utilization Workshop in Fort Collins. I will be attending the workshop, so I will not be at the NFAB meeting next month.

Thompson: There is a program being promoted called "Fuels for Schools", does the Black Hills participate?

Bobzien: Yes, and at this time it is all handled by the state of South Dakota, Greg Josten. Funds go to the state, and they are looking at operations. The Star Academy and the Veterans Home in Hot Springs are set for construction in the fall.

Blair: Lead is going forward with a biomass plant; they are in the process of bidding right now. They had to replace the boiler system which was coal fired, and the augers from the old system will need some renovation, but they will be able to put chips right into it. It will save \$50,000 to \$75,000 per year over a natural gas system.

Bobzien: Craig stated that he drove by the Upton plant, and things are progressing forward there. There are a lot of ethanol pilots right now. There are on going feasibility studies looking at different utilities, and looking at the woody biomass resources. The chips for Fuels for Schools will continue and only get bigger. Pope & Talbot, and Nieman currently have a secondary use of their chips, they are going to Merillat. They will

continue to probe these markets. We are creating more biomass on the forest than we are using. As we use more, this will be good for the community.

Blair: One other thing is that the Lead system is looking at other Co-op partners. We were surprised that Chadron is able to heat things off campus along with the 21 buildings on campus. One area they heated was 30 blocks away. Small communities with public buildings would be good in a Co-ops.

Thompson: America has an insatiable appetite for energy, but there is a loss to the livestock producers because of the cost of corn. This drives the costs up so it just makes sense to use forest waste. Cows and people can't eat forest waste. It is incumbent on this Board, should there be stumbling blocks in the National Forest, in making biomass available. This Board should track this to help Craig and the Forest Service folks to get it out of the woods.

Paulson: Reliability of supply and contracts is going to be key for the contractors. What can we do to help get some 10 and 20 year contracts, some reliability of produce?

Everett: Agree with Bob, reliability of supply is a big deal the biggest deal there is.

Blair: We learned from Mr. Barker on the field trip last year that he will have to update and retrofit his plant. In order to do that, he needs to stretch into the 20 year contract range.

Kloss: This building we are using today is ready for biomass fuel use. It's feasible and the building is ready to go, but we are short on money to proceed. We are \$250,000 away from getting it done in the Mystic office.

Hoyt: Do we have an inventory of biomass utilization projects in the Black Hills?

Kloss: No we do not. Jim Williams came to the Board and gave us a report on a small section of the biomass in the Northern Hills. A biomass inventory of the entire forest would be an on going process, but this it is the first thing we need, by acre, both on public and private lands.

Hoyt: Can we determine what is available? Do we have a listing of the projects that are currently in operation in the Black Hills?

Bobzien: We can assemble a list. What is being evaluated right now is quite lengthy. The supply and the location of the supply have to be determined.

- **Action Item:** Black Hills to assemble a list of current Biomass operations on the Forest.

Culberson: If it continues not to snow, all we'll see is slash piles on this Forest.

Hofer: In the Park our inventory is 18,000 unburned slash piles, which is a huge problem for us.

Blair: Did you (Bob) lose people off the Biomass Sub-Committee?

Kloss: Yes

Blair: If there is anyone interested in serving on the Biomass Sub-Committee please let it be know. We also have the Invasive Species Sub-Committee and the Open Space Sub-Committee with open slots?

Smith: Bob has done a super job, and I would like to see some of the information gathering in terms of the technical and economic feasibility of these projects. The logistics of getting the feed stock in is going to be a major factor. Would Bob be willing to pull this information together?

Kloss: Research and development is complex, there is an expert on the matter at the School of Mines.

Blair: We should have a report in June on biomass and the field trip in August could highlight biomass.

Blair: Thank you Bob for the Biomass presentation.

Open Space Committee ~ Questions from March ~ Mike Lloyd & Bob Paulson:

- Who is affected by loss of open space?
- Who can affect change/action?
- What actions need to be taken?

Lloyd: The Open Space Sub-Committee has met a couple of times. John Culberson checked with the Custer County Commissioners, and they are supportive of a land exchange program.

The State is getting into the Forest Legacy Program which uses federal money to buy conservation easements. They have to come up with a plan and then they can start using the federal money to acquire the easements.

Scherrer: Please repeat, who is trying to get the money?

Lloyd: The Forest Legacy Program allows States to use federal money. Ray Sowers, Director of the Division of Conservation and forestry with the Department of Ag, is in charge of this, and we will be working with him on the Sub-Committee.

Hofer: The program has been around a long time, but South Dakota has not participated.

Lloyd: We believe we need to involve a lot of other people before we go forward with this open space issue. A Wyoming representative would be good, such as someone from the National Wild Turkey Foundation, the Rocky Mountain Elk Foundation, and County Government possibilities as well. Representative Herseth's office and they are supportive of non-simultaneous land exchanges, as long as it does not involve money.

Paulson: As Mike mentioned we met twice since the last Board meeting. There is a lack of funding on this Forest to do land exchanges; this is a big hold up. One idea is to use some of the surplus Forest land to jump start this program. We would sell a piece of land and put the money in a pot and fund the lands program. The second part would be to get the non-simultaneous land exchanges done. We have precedence on this Forest to do this, in the case of the sale of land to build administrative offices. We need Wyoming support on this, someone to go to the Wyoming delegation.

Smith: I will go to the Wyoming delegation for support on this issue.

Paulson: The Sub-Committee proposes to write a special legislation for non-simultaneous land exchanges, we will present the proposed language for the bill next month. Request to put open space on next month's agenda so we can show the maps.

- **Action Item:** Put open space on the May NFAB agenda.

Culberson: The concept of conserving open space is wonderful. The Custer County Commissioners recognize the issue of provision of services to isolated tracts, and it is going to become huge. Look at the implications, road service, fire, ambulance. The minute that the community succumbs to the pressure to provide road service to one of them, it opens the door to every subdivision in Custer County. The County can't afford it. There will never be enough money. We will double the cost of providing road services to Custer County citizens.

Blair: There are currently approximately 10 plus new subdivisions in Lawrence County, some are well back into private ground and trees, approximately 1200 more homes. The problems are huge, roads, fire protection, etc.

Scherrer: Are all these properties accessible through State roads, or only through Forest roads? Trying to deal with open space by getting money to buy the land and keeping people from living there, is very limited as to its success. People want to, and are romantic about, living in the woods. What strikes me is that we are not addressing the issue of personal responsibility. Those who choose to live in those areas should accept the responsibility and take on the responsibility such as fire protection, road maintenance, etc. We need to turn this around and say if you want to live there, you are to be responsible for protection, etc. I'm not opposed to open space preservation; it just won't happen in terms of the big picture.

Smith: This program does make sense on the Wyoming side more than the South Dakota side. A lot of these places are still in the original hands, and they are now coming into the market. Now is the perfect opportunity to try to get a hold of this land, it is the best hope we have. As a counter argument, if I choose to live on a piece of property, I have the right to receive, school access, fire protection, road access.

Bobzien: At the start of the meeting, the Open Space Briefing Paper was handed out but we did not discuss it. Craig Kjar was the author of the briefing paper. It starts with a National perspective, and then the key points pertain to the Black Hills. Different partnerships should be looked at when considering non-simultaneous exchanges. This whole idea is set up to be thinking very broad, multiple activities, out reach, etc.

Bobzien: Getting back to the three questions presented at the beginning of the topic. 1) Who is affected by loss of open space; Counties, Government, Wyoming Government, Tribes? Are there things we should be considering? Who do we affect? What do we need to form that critical mass to be affective? 2) Who can affect change/action; Federal, State, County, non-government actions? 3) What actions need to be taken? We need to capture ideas in order to form a strategy, we need to know what to consider. Some long term strategies and some short term strategies.

Paulson: This is not a new issue; we've talked through this and the non-simultaneous land exchange issue many times.

Scherrer: Relative to the big picture, the pressure being brought on by the realtors and out of state money is a factor. If they have money to spend on buying something out in the woods, and expect to get what they are used to having in the large city where they came from, they should have some responsibility to maintain it. We have no clue in this state how much disposable income is out there and coming into this state. Some of the Forest roads aren't maintained in the winter, how are they going to get to there house when it snows?

Culberson: We don't know because it hasn't snowed.

Blair: Please bring your questions through the chairman.

Hofner: The idea that the committee is throwing out recognizes that there are multiple methods of reducing the loss of open space. I think this proposal has the potential of addressing and obtaining the financing to do what is on the list. Non-simultaneous land exchanges are not the only thing built into the legislation. Conservation easement might be a more appropriate way to go. Look at what the cost of land is going for; it is estimated that the 100 acres in Custer will go for one million dollars. The land in the limestone would be much less. If you choose to buy conservation easements, instead of buying the land outright, you might get twice as much for your money. This isn't an acre by acre thing if it is handled right. Other values are as practical as residential development, fragmentation of the forest, recreation issues, trails, ability to enjoy the Forest, it affects fish and wildlife, it affects values that we hold near and dear that make the Hills a special place. The idea from the committee has a lot of potential, and I'm surprised that in some of the more populated areas, something similar hasn't already been developed. This may be an opportunity to propose a pilot program that would be for a limited amount of time, and might be proposed at a National level. To sit and complain that the land exchange program is unworkable because it is too slow, etc., won't get us anywhere without a viable alternative. This is an alternative that the Board should look at and see how far we can run with it. It may be the bottom line bases for providing cash for getting all the programs moving forward.

Culberson: The problem is a scale issue, we are not going to stop it but we need to slow it down if we can. The other key is that we are looking at trying to provide something that allows quick action and seven to 10 years is not cutting it. We need a mechanism that allows the Forest to take advantage of the individual that has land for sale, and the Government could get a hold of it. It could also help to free up the process for the Forest Service.

Kloss: An article in the AARP magazine states that most of the land is owned by people 55 and older, more than 30% of the forested land in the US. When they sell, 186 million acres will be vulnerable to logging or building. The article says that private forest owners provide wildlife habitat, recreational beauty, air purification, and they do it all for free.

Kloss: The next Open Space Sub-Committee meeting is May 8, 2007 at 12:30 p.m. at the Mystic office.

Blair: I appoint Donovan Sprague and Nels Smith to the Open Space Sub-Committee.

Kloss: We lost Pam Brown from the Northern Hills District for the Biomass Sub-Committee.

Bobzien: Jim Williams from the Northern Hills is your representative. Craig will confirm Jim Williams.

- **Action Item:** Craig to confirm Jim Williams's availability.

Blair: Does this bring the discussion to a close?

Bobzien: In terms of representation, there are a lot of things going on that we could pursue, and there is likely going to be changes in policy. Also, the Board sent a letter in to the National group that is working on open space. They have a target date of May 1, 2007 for the whole National strategy to come out. More information will be coming out on this in the near future.

Scherrer: When will we see the maps?

Paulson: The maps will be presented at the next meeting.

Fen Resources of the Black Hills ~ Beth Burkhart

Bobzien: Introduced Forest Botanist, Beth Burkhart. Beth's topic is on Fens in the Black Hills. Beth will share recent classification and developments regarding Fens.

Blair: Would you like questions as they come up?

Burkhart: Yes

Burkhart: Beth gave a little further introduction of herself. As a Botanist, she studies plants, and works in the field for a land management agency. Botanists are at the table for every project that happens on the Forest. The best part of the job in the summer time is to collect plant data and where the plants are relative to the projects.

PowerPoint Presentation prepared by Beth Burkhart, Patti Lynch, Les Gonyer, and Chelsea Vollmer.

- What is a fen
 - Ancient wetlands (thousands of years old).
 - Organic soil layer (peat or histosol) at least 16 inches thick.
 - Unfaltering groundwater supply.
 - Saturated conditions throughout the year.
 - Variable obligate wetland plant species but includes abundant mosses.

Burkhart: The McIntosh Fen was identified by Arthur McIntosh in 1924. It was used as a hay meadow before the 1980 Anderson land exchange. It was then fenced to exclude livestock in 1985. Willow propagation started in the 1990's. Designated M.A. 3.1 Botanical Area in 1997. The fen contains a walk in fishery. It has a heavy noxious weed infestation. pH level 8.6 which is a "rich" fen. Peat body has been formed by sedges. Straw bales used to slow water movement in 2000 through 2005.

The Black Fox Fen was identified by Rydberg in 1892. It was designated M.A. 3.1 Botanical Area in 1997. OHV and livestock damage was spotlighted in 2004. OHV area closure was implemented in 2005. Black Fox Campground has become an OHV destination. Range allotment management review determined the need to exclude livestock. Fencing started in 2006 by the Eagle Scouts. pH level is 3.6 which is a "poor" fen.

The Silver Creek Fen was discovered by a range survey in 2004. It was documented in a BHNF plant monitoring in 2005. The need for fencing was determined as a result of livestock trampling and utilization of fen vegetation. Fencing was planned but not funded in 2006. Conifer encroachment work was done in 2006.

The North Boxelder Creek Fen had a livestock riparian pasture established in 1989, and fencing is currently ineffective. Damage from livestock was noted in 2006. Sphagnum species was noted in 2003. Relic beaver dams have complex impacts. Site appears to be drying out. The site has a pH level of 5.9 which is a "transitional" fen. Peat body was formed by Sphagnum species and sedges.

The Smith Gulch Fen was identified by Arthur McIntosh in 1930. County Road 306 dissects the fen. The expansion of County Road 306 began in 2006. Livestock impacts have been noted. Large head cut was repaired in 2005. Relic beaver dam has complex impacts. The pH level of the site is 4.6 which is a "poor" fen. Peat body was formed by Sphagnum species and sedges.

The Long Draw Fen included bog iron mining in 1941. Sphagnum species was noted in 1995. Head cut repair was done in 2006. Relic beaver dam has complex impacts. Livestock damage was noted. pH level of the site is 6.2 which is a "transitional" fen. The peat body was formed by Sphagnum species and sedges.

The Solomon Gulch Fen included bog iron mining in 1920. Sphagnum species was noted in 1995. Head cut repair is needed. Relic beaver dam has complex impacts. Livestock damage was noted. pH level at this site is 3.5 to 5.6 which is a "poor/intermediate" fen. The peat body was formed by Sphagnum species and sedges.

Paulson: Are there some fens that have been lost?

Burkhart: Yes, we think we only have a small number of the fens that we originally had in the Black Hills.

Smith: There is no mention of the Multiple Use Act; does that come into play here?

Burkhart: Water supply issue is where fens are brought in, but fens help protect that water supply.

Thompson: You're saying that this fen developed in the absence of grazing?

Burkhart: There was wildlife grazing, but the continuous punching of holes by livestock grazing was absent.

Smith: Did you consider buffalo herds, or other dispersed wildlife grazing?

Burkhart: The grazing that took place came and went; it was not a consistent year after year event.

Thompson: Is this a knee jerk reaction to the way the fen developed to begin with?

Burkhart: Wildlife grazing, but no livestock grazing. We don't know what the best management practices are at this point, we're still studying it and we're open for discussion. I do respect your opinions.

Blair: Does the pH level change over time or with different practices? Does less grazing cause a lower pH level?

Burkhart: As far as I know there is not a connection. The geology it sets in gives it the PH. I would never say that activities may never alter it.

Hoyt: Was there any mention of this in Custer's journals? One of the Horstead pictures, "String of Pearls" was taken in this area.

Burkhart: I don't know that Custer's expedition members were scientifically oriented enough to recognize a fen.

Paulson: The pile of elk horns in the one Horstead photo is about five miles from the site of the McIntosh fen.

Hofer: How big is the exclusion area?

Burkhart: About 100 acres.

Thompson: Your actions ignore the conditions that botanical areas developed and evolved under grazing use. To say we are not going to do that anymore is ignoring the way they developed.

Smith: Nels asked Hugh to state his profession. Since it's an emerging issue, I think it's a good time to recognize these points. To make such a drastic change to the conditions which the fen existed with or resulted from, without an environmental impact statement violates NEPA. The knee jerk reaction can be contrary to what you want. An example of this is an area in Wyoming where they found a specific clover, and based on the previous reaction, they excluded the livestock, and consequently lost five other forms of clover.

Thompson: I am a Forester as well as an Ecologist. You don't just look at the present and say this is good and put a fence around it, because that's not how it evolved. I've been a Range and Wildlife Staff Officer and active in the profession for over 40 years.

Paulson: Where is Silver Creek?

Burkhart: Near Rochford.

Rowe: As the cattle grazing is being removed do you see regeneration?

Burkhart: In the McIntosh Fen, removing the grazing has brought back the willows.

Blair: Do relic beaver dams have an adverse affect?

Burkhart: Sometimes it can help because they can slow the water which is moving through, but at a full blown beaver dam scale, they may stop the mineral flow to the fen.

Paulson: Black Fox was mined on the private property.

Burkhart: What are the data gaps: Lack of a full inventory on known fens, identifying groundwater sources. Complete extent of fens is unknown. Extent that fens have been degraded (for example, by iron mining) is also unknown. The "Best Management Practices" for protecting fens is still unknown. A toolbox of restoration activities has not been identified.

Thompson: In regard to restoration, look at the total water budget. If a fen is totally dependent on water supply, look at hydrology. The Black Hills is not natural, it has been altered significantly. The water yield is probably 40% less than it was years ago. If there is a spring, we should do things to make the spring viable.

Burkhart: Hydrology is the underpinning of it all.

Hoobler: Federal Land Management focuses on health, is there enough known about fens to write fen health, and are there any trends that would help look at fen health?

Burkhart: The scientific knowledge is fairly limited right now, but it's growing.

Hoobler: The key components, being hydrology, and the plant community, hydrology would be a main indicator of fen health. Part of the use is the disturbance, grazing, hoof action, etc., that was a part of the development and fen health. Automatically throwing out something that appears as a negative impact, might have a negative impact. An example of this was a private landowner who discovered a Colorado Butterfly Plant on his property. After confirming the find, the area was fenced from livestock grazing, and the plant then disappeared.

Smith: Hydrology and water yield, as a critical component, was specifically suggested in the Forest planning process in both 1982 and 1992 and both times it was not adopted, and now we see it is critical. The next time the plan is modified, I really suggest that water yield be considered.

Rowe: Is there any anticipation that Dr. Cooper will come back to the Forest for further research?

Burkhart: He would like to come back, but we need more funding.

Sprague: Is there a correlation between the location of a fen and the elevation?

Burkhart: Cooler areas foster the fen, here in the Black Hills they seem to form even at 5,000 feet.

McCracken: Can fens exist in other parts of the State?

Burkhart: Yes

Hofer: There are some in Nebraska and the eastern part of the South Dakota.

Smith: What is the pH balances of the other fens?

Burkhart: We only took water samples at some of the sites last summer.

Smith: Unless you've got the influence of limestone, they would be acidic.

Burkhart: That is true; fens in Colorado are more acidic.

Blair: Where does the word fen come from? They're called peat bogs in Ireland. Erin go braugh!

Burkhart: I will have to research that.

Blair: Thank you Beth for the presentation.

Public Comments:

Chair Blair: If anyone from the public wishes to address the Board, please do so.

No comments from the public were received.

Paulson: Just a reminder that we need an update on the OHV issue.

Blair: Scheduled for the May meeting.

Adjournment:

Chair Blair: If there is no other business to come before the Board, I will ask for a motion to adjourn.

Motion made and seconded. Meeting adjourned at 4:15 p.m.

Next Meeting:

The next NFAB meeting is scheduled for Wednesday, May 16, 2007, at the Forest Service Center in Rapid City, beginning at 1:00 p.m.

Future Meeting Dates:

- June 20, 2007
- July 18, 2007
- August 15, 2007
- Summer Field Trip – To Be Announced
- September 19, 2007
- October 17, 2007
- November 21, 2007
- December – No Meeting